PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Appellant	:	Richard D. Lane		
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BRIEF ON APPEAL

Board of Patent Appeals and Interferences
Commissioner for Patents
Alexandria, VA 22313-1450

Sir:

This is an appeal from a Final Office Action mailed on March 14, 2011, rejecting claims 1-15, 17, 18, 20-30, 32, 34-40, 42-54, 56, 58-64, 66-81, 84-86, 88-94, 96, 98-102, 105, 106, 108-112, and 115-133, and the Advisory Action mailed on July 1, 2011, affirming the rejection of those claims.

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REAL PARTY IN INTEREST

The real party in interest is QUALCOMM Incorporated, the assignee of the entire interest.

RELATED APPEALS AND INTERFERENCES

There are no related appeals, interferences or judicial proceedings for the above-referenced patent application.

STATUS OF CLAIMS

Claims 1-15, 17, 18, 20-30, 32, 34-40, 42-54, 56, 58-64, 66-81, 84-86, 88-94, 96, 98-102, 105, 106, 108-112, and 115-133 are the subject of this Appeal (Appendix 1, Claims).

Claims 1–2, 5, 7–12, 14, 17, 20–23, 25–26, 29, 32, 35–36, 38, 42, 44–47, 49–50, 53, 56–60, 62, 66, 68–71, 73–74, 77, 79–81, 84–86, 91, 93–94, 96–97, 101–102, 105–106, 111–112, 115–118, 122 and 124–133 stand rejected under 35 USC § 103(a) as being unpatentable over Christopoulos et al. (US 2001/0047517; hereinafter "Christopoulos") in view of Kost et al. (US 2002/0154691; hereinafter "Kost"), Short et al. (US 6,789,110; hereinafter "Short") and Mantha et al. (US 2004/0023622; hereinafter "Mantha").

Claims 3–4, 24, 27–28, 48, 51–52, 72, 75–76, 88–90, 98–100, 108–110 and 119–121 stand rejected under 35 USC § 103(a) as being unpatentable over Christopoulos, Kost, and Short, and Mantha, and in further view of Vetro et al. (US 2004/0203851; hereinafter "Vetro").

Claims 6, 30, 54 and 78 stand rejected under 35 USC § 103(a) as being unpatentable over Christopoulos, Kost, Short and Mantha as applied to claims 2, 26, 50 and 74 above, and in view of Wang et al. (US 2002/0152317; hereinafter "Wang").

Claims 13, 15, 37, 39–40, 61, and 63–64 stand rejected under 35 USC § 103(a) as being unpatentable over Christopoulos, Kost, Short and Mantha, and in further view of Anand et al. (US 6,920,179; hereinafter "Anand").

Claims 18, 43 and 67 stand rejected under 35 USC § 103(a) as being unpatentable over Christopoulos, Kost, Short and Mantha as applied to claims 1, 42, and 66 in view of Patterson (US 6,018,369; hereinafter "Patterson") and Tsukagoshi (US 5,731,847; hereinafter "Tsukagoshi").

Claims 92 and 123 stand rejected under 35 USC § 103(a) as being unpatentable over Christopoulos, Kost, Short and Mantha as applied to claims 14, 38, 62, 81, and 112.

STATUS OF AMENDMENTS

No claim amendments have been submitted after the Final Office Action was mailed on August 5, 2010.

SUMMARY OF CLAIMED SUBJECT MATTER

Claim 1

Claim 1 recites an apparatus, operable in a wireless communication system[1], comprising:

a customer manager[2] to determine a first user preference[3] for selective re-encoding of a multimedia stream[4] for a first user and a second user preference[5] for selective re-encoding of the multimedia stream for a second user; [6]

an encode manager[7] included within wireless service provider equipment[8] of the wireless communication system that receives the multimedia stream and selects at least one of a plurality of encoding parameter sets[9] for each of the first and second user preferences in accordance with an encoding scheme[10], wherein the encoding scheme includes a first scheme[11] based on the first user preference and a second scheme[12] based on the second user preference, wherein the multimedia stream includes a plurality of different types of data,[13] wherein the plurality of encoding parameter sets include a first encoding parameter set for encoding only a first type of the plurality of types of data,[14] a second encoding parameter set for encoding only a second type of the plurality of types of data different from the first type,[15] a third encoding parameter set for encoding only a third type of the plurality of types of data different from the first and second types[16] and a fourth encoding parameter set for encoding multiple types of the plurality of types

[1] *See, e.g.*, Appellant's originally-filed Specification at paragraphs [0006], [0010], [0014] and [0020]; and system 10 shown in the example of FIG. 1.
[2] *See, e.g., id.* at paragraphs [0015], [0017], [0018], [0021] and [0022]; and customer and bandwidth manager 28 shown in the example of FIG. 1.
[3] *See, e.g., id.* at paragraphs [0007], [0026], [0027] and [0029].
[4] *See, e.g., id.* at paragraphs [0005]-[0010], [0014], [0015],]0017], [0019]-[0024], [0026], [0027] and [0029].
[5] *See, e.g., id.* at paragraphs [0007], [0026], [0027] and [0029].
[6] *See, e.g., id.* at paragraph [0017].
[7] *See, e.g., id.* at paragraphs [0017], [0021] and [0026]; and encode manager 26 shown in the example of FIG. 1.
[8] *See, e.g., id.* at paragraphs [0014], [0017], [0020] and [0029]; and wireless service provider equipment 12 shown in the example of FIG. 1.
[9] *See, e.g., id.* at paragraphs [0006]-[0008], [0015]-[0018], [0021] and [0024]-[0029]; and encoding parameter sets 30 shown in the example of FIG. 1.
[10] *See, e.g., id.* at paragraph [0009].
[11] *See, e.g., id.* at paragraph [0009].
[12] *See, e.g., id.* at paragraph [0009].
[13] *See, e.g., id.* at paragraph [0009].
[14] *See, e.g., id.* at paragraph [0026].
[15] *See, e.g., id.* at paragraph [0026].
[16] *See, e.g., id.* at paragraph [0026].

of data,[17] and wherein the first user preference and the second user preference each indicates which of the first, second, third and fourth encoding parameter sets to use when encoding the multimedia stream;[18] and

an encoder system[19] included within the wireless service provider equipment for selectively re-encoding the received stream using the selected one of the plurality of encoding parameter sets to output an encoded stream[20] with principles set fourth by the selected one of the plurality of encoding parameter sets,

wherein the first user preference specifies a first demand[21] to provide the multimedia stream at a lower quality of service[22] and a lowest billing rate[23], and the second user preference specifies a second demand to provide the multimedia stream at a higher quality of service and a higher billing rate relative to the first demand,[24] and

wherein in response to the first user preference, the encode manager selects one of the plurality of encoding parameter sets that provides a high rate of compression and the lower quality of service at the lowest billing rate,[25] and in response to the second preference, the encoder manager selects one of the plurality of encoding parameter sets that provides the higher quality of service at the higher billing rate.[26]

Claim 25

Claim 25 recites a method for providing digital multimedia[27] in a wireless communication system[28], comprising:

determining with a customer manager[29] of the wireless communication system a first user preference[30] for selective re-encoding of a multimedia stream[31] for a first user and a second user preference[32] for selective re-encoding of the multimedia stream for a second user; [33]

[17] *See, e.g., id.* at paragraph [0026].
[18] *See, e.g., id.* at paragraph [0026].
[19] *See, e.g., id.* at paragraphs [0015]-[0018] and [0029]; and encoding system 32 shown in the example of FIG. 1.
[20] *See, e.g., id.* at paragraphs [0006] and [0009].
[21] *See, e.g., id.* at paragraphs [0027] and [0028].
[22] *See, e.g., id.* at paragraphs [0007], [0017], [0022] and [0027].
[23] *See, e.g., id.* at paragraph [0027].
[24] *See, e.g., id.* at paragraph [0027].
[25] *See, e.g., id.* at paragraph [0027].
[26] *See, e.g., id.* at paragraph [0027].
[27] *See, e.g., id.* at paragraph [0009].
[28] *See, e.g., id.* at paragraphs [0006], [0010], [0014] and [0020]; and system 10 shown in the example of FIG. 1.

receiving the multimedia stream at an encode manager[34] of the wireless communication system;

selecting at least one of a plurality of encoding parameter sets[35] in accordance with an encoding scheme[36] for each of the first and second user preferences,

wherein the encoding scheme includes a first scheme[37] based on a first user preference and a second scheme[38] based on the second user preference,

wherein the multimedia stream includes a plurality of different types of data,[39]

wherein the plurality of encoding parameter sets include a first encoding parameter set for encoding only a first type of the plurality of types of data,[40] a second encoding parameter set for encoding only a second type of the plurality of types of data different from the first type,[41] a third encoding parameter set for encoding only a third type of the plurality of types of data different from the first and second types[42] and a fourth encoding parameter set for encoding multiple types of the plurality of types of data,[43] and

wherein the first user preference and the second user preference each indicates which of the first, second, third and fourth encoding parameter sets to use when encoding the multimedia stream;[44] and

selectively re-encoding, with an encoder system[45] of the wireless communication system, the received stream using the selected one of the plurality of encoding parameter sets to output

[29] *See*, *e.g.*, *id*. at paragraphs [0015], [0017], [0018], [0021] and [0022]; and customer and bandwidth manager 28 shown in the example of FIG. 1.
[30] *See*, *e.g.*, *id*. at paragraphs [0007], [0026], [0027] and [0029].
[31] *See*, *e.g.*, *id*. at paragraphs [0005]-[0010], [0014], [0015],]0017], [0019]-[0024], [0026], [0027] and [0029].
[32] *See*, *e.g.*, *id*. at paragraphs [0007], [0026], [0027] and [0029].
[33] *See*, *e.g.*, *id*. at paragraphs [0017].
[34] *See*, *e.g.*, *id*. at paragraphs [0017], [0021] and [0026]; and encode manager 26 shown in the example of FIG. 1.
[35] *See*, *e.g.*, *id*. at paragraphs [0006]-[0008], [0015]-[0018], [0021] and [0024]-[0029]; and encoding parameter sets 30 shown in the example of FIG. 1.
[36] *See*, *e.g.*, *id*. at paragraph [0009].
[37] *See*, *e.g.*, *id*. at paragraph [0009].
[38] *See*, *e.g.*, *id*. at paragraph [0009].
[39] *See*, *e.g.*, *id*. at paragraph [0009].
[40] *See*, *e.g.*, *id*. at paragraph [0026].
[41] *See*, *e.g.*, *id*. at paragraph [0026].
[42] *See*, *e.g.*, *id*. at paragraph [0026].
[43] *See*, *e.g.*, *id*. at paragraph [0026].
[44] *See*, *e.g.*, *id*. at paragraph [0026].
[45] *See*, *e.g.*, *id*. at paragraphs [0015]-[0018] and [0029]; and encoding system 32 shown in the example of FIG. 1.

an encoded stream[46] with principles set fourth by the selected one of the plurality of encoding parameter sets,

wherein the first user preference specifies a first demand[47] to provide the multimedia stream at a lower quality of service[48] and a lowest billing rate[49], and the second user preference specifies a second demand to provide the multimedia stream at a higher quality of service and a higher billing rate relative to the first demand,[50] and

wherein in response to the first user preference, the encode manager selects one of the plurality of encoding parameter sets that provides a high rate of compression and the lower quality of service at the lowest billing rate,[51] and in response to the second preference, the encoder manager selects one of the plurality of encoding parameter sets that provides the higher quality of service at the higher billing rate.[52]

Claim 49

Claim 49 recites an apparatus, operable in a wireless communication system[53], comprising:

means for receiving[54], within the wireless communication system, a decoded stream[55];

means for determining[56] a first user preference[57] for selectively re-encoding the decoded stream for a first user and a second user preference[58] for selective re-encoding of the multimedia stream for a second user;

means for selecting[59], within the wireless communication system, at least one of a plurality of encoding parameter sets[60] in accordance with an encoding scheme[61] to use for re-encoding the received decoded stream for each of the first and second user preferences,

[46] *See, e.g., id.* at paragraphs [0006] and [0009].
[47] *See, e.g., id.* at paragraphs [0027] and [0028].
[48] *See, e.g., id.* at paragraphs [0007], [0017], [0022] and [0027].
[49] *See, e.g., id.* at paragraph [0027].
[50] *See, e.g., id.* at paragraph [0027].
[51] *See, e.g., id.* at paragraph [0027].
[52] *See, e.g., id.* at paragraph [0027].
[53] *See, e.g., id.* at paragraphs [0006], [0010], [0014] and [0020]; and system 10 shown in the example of FIG. 1.
[54] *See, e.g., id.* at paragraphs [0017], [0021] and [0026]; and encode manager 26 shown in the example of FIG. 1.
[55] *See, e.g., id.* at paragraphs [0006], [0009] and [0015].
[56] *See, e.g., id.* at paragraphs [0015], [0017], [0018], [0021] and [0022]; and customer and bandwidth manager 28 shown in the example of FIG. 1.
[57] *See, e.g., id.* at paragraphs [0007], [0026], [0027] and [0029].
[58] *See, e.g., id.* at paragraphs [0007], [0026], [0027] and [0029].
[59] *See, e.g., id.* at paragraphs [0017], [0021] and [0026]; and encode manager 26 shown in the example of FIG. 1.
[60] *See, e.g., id.* at paragraphs [0006]-[0008], [0015]-[0018], [0021] and [0024]-[0029]; and encoding parameter sets 30 shown in the example of FIG. 1.

wherein the encoding scheme includes a first scheme[62] based on the first user preference and a second scheme[63] based on the second user preference,

wherein the decoded stream includes a plurality of different types of data,[64]

wherein the plurality of encoding parameter sets include a first encoding parameter set for encoding only a first type of the plurality of types of data,[65] a second encoding parameter set for encoding only a second type of the plurality of types of data different from the first type,[66] a third encoding parameter set for encoding only a third type of the plurality of types of data different from the first and second types[67] and a fourth encoding parameter set for encoding multiple types of the plurality of types of data,[68] and

wherein the first user preference and the second user preference each indicates which of the first, second, third and fourth encoding parameter sets to use when encoding the decoded stream;[69] and

means for re-encoding[70], within the wireless communication system, the received decoded stream to output an encoded stream in accordance with the selected one of the plurality of encoding parameter sets,

wherein the first user preference specifies a first demand[71] to provide the multimedia stream at a lower quality of service[72] and a lowest billing rate[73], and the second user preference specifies a second demand to provide the multimedia stream at a higher quality of service and a higher billing rate relative to the first demand, [74] and

wherein the means for selecting at least one of a plurality of encoding parameter sets comprises means for selecting, in response to the first user preference, one of the plurality of encoding parameter sets that provides a high rate of compression and the lower quality of service

[61] *See*, *e.g.*, *id.* at paragraphs [0009].
[62] *See*, *e.g.*, *id.* at paragraph [0009].
[63] *See*, *e.g.*, *id.* at paragraph [0009].
[64] *See*, *e.g.*, *id.* at paragraph [0009].
[65] *See*, *e.g.*, *id.* at paragraph [0026].
[66] *See*, *e.g.*, *id.* at paragraph [0026].
[67] *See*, *e.g.*, *id.* at paragraph [0026].
[68] *See*, *e.g.*, *id.* at paragraph [0026].
[69] *See*, *e.g.*, *id.* at paragraph [0026].
[70] *See*, *e.g.*, *id.* at paragraphs [0015]-[0018] and [0029]; and encoding system 32 shown in the example of FIG. 1.
[71] *See*, *e.g.*, *id.* at paragraphs [0027] and [0028].
[72] *See*, *e.g.*, *id.* at paragraphs [0007], [0017], [0022] and [0027].
[73] *See*, *e.g.*, *id.* at paragraph [0027].
[74] *See*, *e.g.*, *id.* at paragraph [0027].

at the lowest billing rate,[75] and in response to the second preference, one of the plurality of encoding parameter sets that provides the higher quality of service at the higher billing rate.[76]

Claim 73

Claim 73 recites a mobile station[77], operable in a communication system[78], comprising:

a transceiver[79] configured to communicate with a wireless provider system[80]; and

a processor[81] for displaying a multimedia stream[82] received from the wireless provider system via the transceiver, wherein the multimedia stream is encoded using a first one of a plurality of encoding parameter sets[83] and a second one of the plurality of encoding parameter sets in accordance with an encoding scheme[84],

wherein the encoding scheme comprises a first scheme[85] based a first user preference[86] and a second scheme[87] based on a second user preference[88],

wherein the multimedia stream includes a plurality of different types of data,[89]

wherein the plurality of encoding parameter sets include a first encoding parameter set for encoding only a first type of the plurality of types of data,[90] a second encoding parameter set for encoding only a second type of the plurality of types of data different from the first type,[91] a third encoding parameter set for encoding only a third type of the plurality of types of data different

[75] *See, e.g., id.* at paragraph [0027].
[76] *See, e.g., id.* at paragraph [0027].
[77] *See, e.g., id.* at paragraphs [0003], [0009], [0014], [0017], [0020], [0022]-[0024], [0027] and [0029]; and mobile station 14 shown in the example of FIG. 1.
[78] *See, e.g., id.* at paragraphs [0006], [0010], [0014] and [0020]; and system 10 shown in the example of FIG. 1.
[79] *See, e.g., id.* at paragraph [0020]; and transceiver 40 shown in the example of FIG. 1.
[80] *See, e.g., id.* at paragraphs [0006], [0010], [0014] and [0020]; and system 10 shown in the example of FIG. 1.
[81] *See, e.g., id.* at paragraph [0020]; and processor 36 shown in the example of FIG. 1.
[82] *See, e.g., id.* at paragraphs [0005]-[0010], [0014], [0015],]0017], [0019]-[0024], [0026], [0027] and [0029].
[83] *See, e.g., id.* at paragraphs [0006]-[0008], [0015]-[0018], [0021] and [0024]-[0029]; and encoding parameter sets 30 shown in the example of FIG. 1.
[84] *See, e.g., id.* at paragraph [0009].
[85] *See, e.g., id.* at paragraph [0009].
[86] *See, e.g., id.* at paragraphs [0007], [0026], [0027] and [0029].
[87] *See, e.g., id.* at paragraph [0009].
[88] *See, e.g., id.* at paragraphs [0007], [0026], [0027] and [0029].
[89] *See, e.g., id.* at paragraph [0009].
[90] *See, e.g., id.* at paragraph [0026].
[91] *See, e.g., id.* at paragraph [0026].

from the first and second types[92] and a fourth encoding parameter set for encoding multiple types of the plurality of types of data,[93]

wherein the first user preference and the second user preference each indicates which of the first, second, third and fourth encoding parameter sets to use when encoding the multimedia stream,[94]

wherein the first user preference specifies a first demand[95] to provide the multimedia stream at a lower quality of service[96] and a lowest billing rate[97], and the second user preference specifies a second demand to provide the multimedia stream at a higher quality of service and a higher billing rate relative to the first demand[98] such that in response to the first user preference, one of the plurality of encoding parameter sets that provides a high rate of compression and the lower quality of service is selected to provide the lowest billing rate,[99] and in response to the second preference, one of the plurality of encoding parameter sets is selected to provide the higher quality of service at the higher billing rate.[100]

Claim 80

Claim 80 recites a communication system[101], comprising:

a customer manager[102] to determine a first user preference for selective re-encoding of a multimedia stream[103], and a second user preference[104] for selective re-encoding of a multimedia stream;

an encode manager[105] that receives the multimedia stream, wherein the multimedia stream is encoded at a first resolution[106]; and

[92] *See, e.g., id.* at paragraph [0026].
[93] *See, e.g., id.* at paragraph [0026].
[94] *See, e.g., id.* at paragraph [0026].
[95] *See, e.g., id.* at paragraphs [0027] and [0028].
[96] *See, e.g., id.* at paragraphs [0007], [0017], [0022] and [0027].
[97] *See, e.g., id.* at paragraph [0027].
[98] *See, e.g., id.* at paragraph [0027].
[99] *See, e.g., id.* at paragraph [0027].
[100] *See, e.g., id.* at paragraph [0027].
[101] *See, e.g., id.* at paragraphs [0006], [0010], [0014] and [0020]; and system 10 shown in the example of FIG. 1.
[102] *See, e.g., id.* at paragraphs [0015], [0017], [0018], [0021] and [0022]; and customer and bandwidth manager 28 shown in the example of FIG. 1.
[103] *See, e.g., id.* at paragraphs [0005]-[0010], [0014], [0015],]0017], [0019]-[0024], [0026], [0027] and [0029].
[104] *See, e.g., id.* at paragraphs [0007], [0026], [0027] and [0029].
[105] *See, e.g., id.* at paragraphs [0017], [0021] and [0026]; and encode manager 26 shown in the example of FIG. 1.
[106] *See, e.g., id.* at paragraphs [0008], [0015], [0017], [0018] and [0024].

an encoder system[107] that dynamically customizes[108] a re-encoding of the received stream to a second resolution and a third resolution using encoding parameter sets[109] selected from a plurality of encoding parameter sets[110] to selectively render an encoded stream[111] with principles set forth by the selected encoding parameter sets, wherein the selected encoding parameter sets are determined based on an encoding scheme[112],

wherein the encoding scheme includes a first scheme[113] based on the first user preference and a second scheme[114] based on the second user preference,

wherein the multimedia stream includes a plurality of different types of data, [115]

wherein the plurality of encoding parameter sets include a first encoding parameter set for encoding only a first type of the plurality of types of data,[116] a second encoding parameter set for encoding only a second type of the plurality of types of data different from the first type,[117] a third encoding parameter set for encoding only a third type of the plurality of types of data different from the first and second types[118] and a fourth encoding parameter set for encoding multiple types of the plurality of types of data,[119]

wherein the first user preference and the second user preference each indicates which of the first, second, third and fourth encoding parameter sets to use when encoding the multimedia stream,[120] and

wherein the first user preference further specifies a first demand[121] to provide the multimedia stream at a lower quality of service[122] and a lowest billing rate[123], and the second

[107] *See, e.g., id.* at paragraphs [0015]-[0018] and [0029]; and encoding system 32 shown in the example of FIG. 1.
[108] *See, e.g., id.* at paragraph [0029].
[109] *See, e.g., id.* at paragraphs [0006]-[0008], [0015]-[0018], [0021] and [0024]-[0029]; and encoding parameter sets 30 shown in the example of FIG. 1.
[110] *See, e.g., id.* at paragraphs [0006]-[0008], [0015]-[0018], [0021] and [0024]-[0029]; and encoding parameter sets 30 shown in the example of FIG. 1.
[111] *See, e.g., id.* at paragraphs [0006] and [0009].
[112] *See, e.g., id.* at paragraph [0009].
[113] *See, e.g., id.* at paragraph [0009].
[114] *See, e.g., id.* at paragraph [0009].
[115] *See, e.g., id.* at paragraph [0009].
[116] *See, e.g., id.* at paragraph [0026].
[117] *See, e.g., id.* at paragraph [0026].
[118] *See, e.g., id.* at paragraph [0026].
[119] *See, e.g., id.* at paragraph [0026].
[120] *See, e.g., id.* at paragraph [0026].
[121] *See, e.g., id.* at paragraphs [0027] and [0028].
[122] *See, e.g., id.* at paragraphs [0007], [0017], [0022] and [0027].
[123] *See, e.g., id.* at paragraph [0027].

user preference specifies a second demand to provide the multimedia stream at a higher quality of service and a higher billing rate relative to the first demand,[124] and

wherein in response to the first user preference, the encoder system selects at least one of the plurality of encoding parameter sets that provides a high rate of compression and the lower quality of service at the lowest billing rate[125] and in response to the second preference, the encoder system selects one of the plurality of encoding parameter sets that provides the higher quality of service at the higher billing rate.[126]

Claim 81

Claim 81 recites a communication system[127], comprising:

at least one decoder[128] receiving an incoming encoded multimedia stream[129] and decoding the stream to render a decoded stream[130];

a customer manager[131] to determine a first user preference[132] for selective re-encoding of the decoded stream, and a second user preference[133] for selective re-encoding of a multimedia stream;

at least one encoding system[134] configured for receiving the decoded stream and encoding the decoded stream for first and second users using at least one of a plurality of encoding parameter sets[135] to render an encoded stream[136];

at least one computer[137] that selects the at least one of the plurality of encoding parameter sets for each of the first and second users based on the first a user preference[138] and the second

[124] *See, e.g., id.* at paragraph [0027].
[125] *See, e.g., id.* at paragraph [0027].
[126] *See, e.g., id.* at paragraph [0027].
[127] *See, e.g., id.* at paragraphs [0006], [0010], [0014] and [0020]; and system 10 shown in the example of FIG. 1.
[128] *See, e.g., id.* at paragraphs [0006], [0015] and [0021], ; and decoder 24 shown in the example of FIG. 1.
[129] *See, e.g., id.* at paragraphs [0005]-[0010], [0014], [0015],]0017], [0019]-[0024], [0026], [0027] and [0029].
[130] *See, e.g., id.* at paragraphs [0006], [0009] and [0015].
[131] *See, e.g., id.* at paragraphs [0015], [0017], [0018], [0021] and [0022]; and customer and bandwidth manager 28 shown in the example of FIG. 1.
[132] *See, e.g., id.* at paragraphs [0007], [0026], [0027] and [0029].
[133] *See, e.g., id.* at paragraphs [0007], [0026], [0027] and [0029].
[134] *See, e.g., id.* at paragraphs [0015]-[0018] and [0029]; and encoding system 32 shown in the example of FIG. 1.
[135] *See, e.g., id.* at paragraphs [0006]-[0008], [0015]-[0018], [0021] and [0024]-[0029]; and encoding parameter sets 30 shown in the example of FIG. 1.
[136] *See, e.g., id.* at paragraphs [0006] and [0009].
[137] *See, e.g., id.* at paragraphs [0006], [0007], [0014], [0015] and [0020].
[138] *See, e.g., id.* at paragraphs [0007], [0026], [0027] and [0029].

user preference[139], wherein the multimedia stream includes a plurality of different types of data,[140] wherein the plurality of encoding parameter sets include a first encoding parameter set for encoding only a first type of the plurality of types of data,[141] a second encoding parameter set for encoding only a second type of the plurality of types of data different from the first type,[142] a third encoding parameter set for encoding only a third type of the plurality of types of data different from the first and second types[143] and a fourth encoding parameter set for encoding multiple types of the plurality of types of data,[144] and wherein the first and second user preferences indicate which of the first, second, third and fourth encoding parameter sets to use when encoding the multimedia stream,[145]

wherein the first user preference specifies a first demand[146] to provide the multimedia stream at a lower quality of service[147] and a lowest billing rate[148], and the second user preference specifies a second demand to provide the multimedia stream at a higher quality of service and a higher billing rate relative to the first demand,[149] and

wherein in response to the first user preference, the at least one computer selects the at least one of a plurality of encoding parameter sets that provides a high rate of compression and the lower quality of service at the lowest billing rate[150] and in response to the second preference, the encoder system selects one of the plurality of encoding parameter sets that provides the higher quality of service at the higher billing rate;[151] and

at least one wireless transceiver[152] for transmitting an encoded stream.

Claim 93

Claim 93 recites method for wirelessly providing digital multimedia[153] within a wireless communication system[154], comprising:

[139] *See*, *e.g.*, *id*. at paragraphs [0007], [0026], [0027] and [0029].
[140] *See*, *e.g.*, *id*. at paragraph [0009].
[141] *See*, *e.g.*, *id*. at paragraph [0026].
[142] *See*, *e.g.*, *id*. at paragraph [0026].
[143] *See*, *e.g.*, *id*. at paragraph [0026].
[144] *See*, *e.g.*, *id*. at paragraph [0026].
[145] *See*, *e.g.*, *id*. at paragraph [0026].
[146] *See*, *e.g.*, *id*. at paragraphs [0027] and [0028].
[147] *See*, *e.g.*, *id*. at paragraphs [0007], [0017], [0022] and [0027].
[148] *See*, *e.g.*, *id*. at paragraph [0027].
[149] *See*, *e.g.*, *id*. at paragraph [0027].
[150] *See*, *e.g.*, *id*. at paragraph [0027].
[151] *See*, *e.g.*, *id*. at paragraph [0027].
[152] *See*, *e.g.*, *id*. at paragraphs [0006] and [0019].

receiving an encoded multimedia stream;[155]

decoding the stream to render a decoded stream;[156]

selecting at least one of a plurality of encoding schemes[157] to re-encode the stream at a wireless provider facility[158] to render a re-encoded stream based on a first user preference[159] and render a re-encoded stream based on a second user preference[160], wherein the multimedia streams includes a plurality of different types of data,[161] wherein the plurality of encoding parameter sets include a first encoding parameter set for encoding only a first type of the plurality of types of data,[162] a second encoding parameter set for encoding only a second type of the plurality of types of data different from the first type,[163] a third encoding parameter set for encoding only a third type of the plurality of types of data different from the first and second types[164] and a fourth encoding parameter set for encoding multiple types of the plurality of types of data,[165]

wherein the first and second user preferences each indicates which of the first, second, third and fourth encoding parameter sets to use when encoding the multimedia stream,[166] and

wherein the first user preference specifies a first demand[167] to provide the multimedia stream at a lower quality of service[168] and a lowest billing rate[169], and the second user preference specifies a second demand to provide the multimedia stream at a higher quality of service and a higher billing rate relative to the first demand,[170] and

selecting a first one of the plurality of encoding parameter sets that provides a high rate of compression and the lower quality of service at the lowest billing rate[171] and selecting a second

[153] *See, e.g., id.* at paragraph [0009].
[154] *See, e.g., id.* at paragraphs [0006], [0010], [0014] and [0020]; and system 10 shown in the example of FIG. 1.
[155] *See, e.g., id.* at paragraphs [0017], [0021] and [0026]; and encode manager 26 shown in the example of FIG. 1.
[156] *See, e.g., id.* at paragraphs [0006], [0009] and [0015].
[157] *See, e.g., id.* at paragraph [0009].
[158] *See, e.g., id.* at paragraph [0009].
[159] *See, e.g., id.* at paragraphs [0007], [0026], [0027] and [0029].
[160] *See, e.g., id.* at paragraphs [0007], [0026], [0027] and [0029].
[161] *See, e.g., id.* at paragraph [0009].
[162] *See, e.g., id.* at paragraph [0026].
[163] *See, e.g., id.* at paragraph [0026].
[164] *See, e.g., id.* at paragraph [0026].
[165] *See, e.g., id.* at paragraph [0026].
[166] *See, e.g., id.* at paragraph [0026].
[167] *See, e.g., id.* at paragraphs [0027] and [0028].
[168] *See, e.g., id.* at paragraphs [0007], [0017], [0022] and [0027].
[169] *See, e.g., id.* at paragraph [0027].
[170] *See, e.g., id.* at paragraph [0027].
[171] *See, e.g., id.* at paragraph [0027].

one of the plurality of encoding parameter sets that provides the highest quality of service at the higher billing rate;[172] and

wirelessly transmitting[173] the re-encoded streams to at least one wireless mobile station[174].

Claim 102

Claim 102 recites a wireless provider system[175], comprising:

means for decoding[176] a received encoded multimedia stream[177], wherein the encoded multimedia stream includes a plurality of different types of data;[178]

first means[179] for re-encoding only a first type of the plurality of types of the data;

second means[180] for re-encoding only a second type different from the first type of the plurality of types of the data;

third means[181] for re-encoding only a third type different from the first and second types of the plurality of types of the data;

fourth means[182] for re-encoding multiple types of the plurality of types of the data; and

logic means[183] for determining which one of the first, second, third and fourth means for re-encoding the stream to use for a first user and for a second user, based on a first user preference[184] and a second user preference[185], wherein the first user preference and the second user preference each indicates which of the first, second, third and fourth means to use when encoding the multimedia stream,[186] and

wherein the first user preference further indicates which of the first, second, third and fourth means to use when encoding the multimedia stream based a first demand[187] specified in

[172] *See, e.g., id.* at paragraph [0027].
[173] *See, e.g., id.* at paragraph [0006] and [0019].
[174] *See, e.g., id.* at paragraphs [0003], [0009], [0014], [0017], [0020], [0022]-[0024], [0027] and [0029]; and mobile station 14 shown in the example of FIG. 1.
[175] *See, e.g., id.* at paragraphs [0006], [0010], [0014] and [0020]; and system 10 shown in the example of FIG. 1.
[176] *See, e.g., id.* at paragraphs [0006], [0015] and [0021], ; and decoder 24 shown in the example of FIG. 1.
[177] *See, e.g., id.* at paragraphs [0005]-[0010], [0014], [0015],]0017], [0019]-[0024], [0026], [0027] and [0029].
[178] *See, e.g., id.* at paragraph [0009].
[179] *See, e.g., id.* at paragraph [0026].
[180] *See, e.g., id.* at paragraph [0026].
[181] *See, e.g., id.* at paragraph [0026].
[182] *See, e.g., id.* at paragraph [0026].
[183] *See, e.g., id.* at paragraphs [0015]-[0018] and [0029]; and encoding system 32 shown in the example of FIG. 1.
[184] *See, e.g., id.* at paragraphs [0007], [0026], [0027] and [0029].
[185] *See, e.g., id.* at paragraphs [0007], [0026], [0027] and [0029].
[186] *See, e.g., id.* at paragraph [0026].
[187] *See, e.g., id.* at paragraphs [0027] and [0028].

the first user preference to provide the multimedia stream at lower quality of service[188] and a lower billing rate[189], and wherein the second user preference specifies a second demand to provide the multimedia stream at a higher quality of service and a higher billing rate relative to the first demand.[190]

Claim 112

Claim 112 recites a communication system[191], comprising:

decoder means[192] for receiving incoming encoded multimedia streams[193] and decoding the streams to output decoded streams[194];

encoder means[195] for receiving and encoding at least one of the decoded streams using a plurality of encoding parameter sets[196] to output an encoded stream[197] for a first user and an encoded stream for a second user,

wherein the encoder means further includes means for selecting encoding parameters sets based on a first user preference[198] and the second user preference[199], wherein the multimedia streams include a plurality of different types of data,[200] wherein the plurality of encoding parameter sets include a first encoding parameter set for encoding only a first type of the plurality of types of data,[201] a second encoding parameter set for encoding only a second type of the plurality of types of data different from the first type,[202] a third encoding parameter set for encoding only a third type of the plurality of types of data different from the first and second types[203] and a fourth encoding parameter set for encoding multiple types of the plurality of types

[188] *See, e.g., id.* at paragraphs [0007], [0017], [0022] and [0027].
[189] *See, e.g., id.* at paragraph [0027].
[190] *See, e.g., id.* at paragraph [0027].
[191] *See, e.g., id.* at paragraphs [0006], [0010], [0014] and [0020]; and system 10 shown in the example of FIG. 1.
[192] *See, e.g., id.* at paragraphs [0006], [0015] and [0021], ; and decoder 24 shown in the example of FIG. 1.
[193] *See, e.g., id.* at paragraphs [0005]-[0010], [0014], [0015],]0017], [0019]-[0024], [0026], [0027] and [0029].
[194] *See, e.g., id.* at paragraphs [0006], [0009] and [0015].
[195] *See, e.g., id.* at paragraphs [0015]-[0018] and [0029]; and encoding system 32 shown in the example of FIG. 1.
[196] *See, e.g., id.* at paragraphs [0006]-[0008], [0015]-[0018], [0021] and [0024]-[0029]; and encoding parameter sets 30 shown in the example of FIG. 1.
[197] *See, e.g., id.* at paragraphs [0006] and [0009].
[198] *See, e.g., id.* at paragraphs [0007], [0026], [0027] and [0029].
[199] *See, e.g., id.* at paragraphs [0007], [0026], [0027] and [0029].
[200] *See, e.g., id.* at paragraph [0009].
[201] *See, e.g., id.* at paragraph [0026].
[202] *See, e.g., id.* at paragraph [0026].
[203] *See, e.g., id.* at paragraph [0026].

of data,[204] wherein the first and second user preferences each indicates which of the first, second, third and fourth encoding parameter sets to use when encoding the multimedia stream,[205]

wherein the first user preference specifies a first demand[206] to provide the multimedia stream at a lower quality of service[207] and a lowest billing rate[208], and the second user preference specifies a second demand to provide the multimedia stream at a higher quality of service and a higher billing rate relative to the first demand[209]

wherein in response to the first user preference, the encoder means selects a first one of a plurality of encoding parameter that provides a high rate of compression and the lower quality of service at the lowest billing rate[210] and in response to the second user preference, selects a second one of the plurality of encoding parameter sets that provides the highest quality of service at the higher billing rate.[211]

[204] *See*, *e.g.*, *id*. at paragraph [0026].
[205] *See*, *e.g.*, *id*. at paragraph [0026].
[206] *See*, *e.g.*, *id*. at paragraphs [0027] and [0028].
[207] *See*, *e.g.*, *id*. at paragraphs [0007], [0017], [0022] and [0027].
[208] *See*, *e.g.*, *id*. at paragraph [0027].
[209] *See*, *e.g.*, *id*. at paragraph [0027].
[210] *See*, *e.g.*, *id*. at paragraph [0027].
[211] *See*, *e.g.*, *id*. at paragraph [0027].

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Appellant submits the following grounds of rejection to be reviewed on Appeal:

(1) Rejection of claims 1–2, 5, 7–12, 14, 17, 20–23, 25–26, 29, 32, 35–36, 38, 42, 44–47, 49–50, 53, 56–60, 62, 66, 68–71, 73–74, 77, 79–81, 84–86, 91, 93–94, 96–97, 101–102, 105–106, 111–112, 115–118, 122 and 124–133 under 35 USC § 103(a) as being unpatentable over Christopoulos et al. (US 2001/0047517; hereinafter "Christopoulos") in view of Kost et al. (US 2002/0154691; hereinafter "Kost"), Short et al. (US 6,789,110; hereinafter "Short") and Mantha et al. (US 2004/0023622; hereinafter "Mantha").

(2) Rejection of claims 3–4, 24, 27–28, 48, 51–52, 72, 75–76, 88–90, 98–100, 108–110 and 119–121 under 35 USC § 103(a) as being unpatentable over Christopoulos, Kost, and Short, and Mantha, and in further view of Vetro et al. (US 2004/0203851; hereinafter "Vetro").

(3) Rejection of claims 6, 30, 54 and 78 under 35 USC § 103(a) as being unpatentable over Christopoulos, Kost, Short and Mantha as applied to claims 2, 26, 50 and 74 above, and in view of Wang et al. (US 2002/0152317; hereinafter "Wang").

(4) Rejection of claims 13, 15, 37, 39–40, 61, and 63–64 under 35 USC § 103(a) as being unpatentable over Christopoulos, Kost, Short and Mantha, and in further view of Anand et al. (US 6,920,179; hereinafter "Anand").

(5) Rejection of claims 18, 43 and 67 under 35 USC § 103(a) as being unpatentable over Christopoulos, Kost, Short and Mantha as applied to claims 1, 42, and 66 in view of Patterson (US 6,018,369; hereinafter "Patterson") and Tsukagoshi (US 5,731,847; hereinafter "Tsukagoshi").

(6) Rejection of claims 92 and 123 under 35 USC § 103(a) as being unpatentable over Christopoulos, Kost, Short and Mantha as applied to claims 14, 38, 62, 81, and 112.

ARGUMENT

Appellant respectfully traverses the current rejections advanced by the Examiner, and requests reversal by the Board of Patent Appeals based on the arguments below. The applied references fail to disclose or suggest features of Appellant's claims. Several different sets of claims are presented under separate headings. Accordingly, Appellant requests review of each of the different sets of claims presented under the separate headings.

FIRST GROUND OF REJECTION UNDER APPEAL

The Final Office Action maintained the rejection of claims 1–2, 5, 7–12, 14, 17, 20–23, 25–26, 29, 32, 35–36, 38, 42, 44–47, 49–50, 53, 56–60, 62, 66, 68–71, 73–74, 77, 79–81, 84–86, 91, 93–94, 96–97, 101–102, 105–106, 111–112, 115–118, 122 and 124–130 under 35 USC § 103(a) as being unpatentable over Christopoulos et al. (US 2001/0047517; hereinafter "Christopoulos") in view of Kost et al. (US 2002/0154691; hereinafter "Kost"), Short et al. (US 6,789,110; hereinafter "Short") and Mantha et al. (US 2004/0023622; hereinafter "Mantha"). Appellant argues claims 1-2, 5, 7, 9-12, 14, 17 and 20-23 as a first group, claim 8 separately as a second group, claims 25–26, 29, 32, 35–36, 38, 42 and 44–47 as a third group, claims 49–50, 53, 56–60, 62, 66 and 68–71 as a fourth group, claims 73–74, 77 and 79 as a fifth group, claim 80 separately as a sixth group, claims 81, 84–86 and 91 as a seventh group, claims 93–94, 96–97 and 101 as an eighth group, claims 102, 105–106 and 111 as an ninth group, claims 112, 115–118, 122 and 124–131 as a tenth group, claim 132 as an eleventh group and claim 133 as the twelfth group.

Claims 1-2, 5, 7, 9-12, 14, 17 and 20-23 (Group 1)

Appellant argues claims 1-2, 5, 7, 9-12, 14, 17 and 20-23 as a group. Appellant directs the Board to independent claim 1 as the claim representative of the group. Appellant's independent claim 1 recites an apparatus operable in a wireless communication system. According to claim 1, the apparatus comprises a customer manager to determine a first user preference for selective re-encoding of a multimedia stream for a first user and a second user preference for selective re-encoding of the multimedia stream for a second user. The apparatus of claim 1 also comprises an encode manager included within wireless service provider

equipment of the wireless communication system that receives the multimedia stream and selects at least one of a plurality of encoding parameter sets for each of the first and second user preferences in accordance with an encoding scheme. The encoding scheme includes a first scheme based on the first user preference and a second scheme based on the second user preference. The multimedia stream includes a plurality of different types of data. The plurality of encoding parameter sets include a first encoding parameter set for encoding only a first type of the plurality of types of data, a second encoding parameter set for encoding only a second type of the plurality of types of data different from the first type, a third encoding parameter set for encoding only a third type of the plurality of types of data different from the first and second types and a fourth encoding parameter set for encoding multiple types of the plurality of types of data. The first user preference and the second user preference each indicates which of the first, second, third and fourth encoding parameter sets to use when encoding the multimedia stream.

Claim 1 also requires that the apparatus comprise an encoder system included within the wireless service provider equipment for selectively re-encoding the received stream using the selected one of the plurality of encoding parameter sets to output an encoded stream with principles set fourth by the selected one of the plurality of encoding parameter sets. The first user preference specifies a first demand to provide the multimedia stream at a lower quality of service and a lowest billing rate, and the second user preference specifies a second demand to provide the multimedia stream at a higher quality of service and a higher billing rate relative to the first demand. In response to the first user preference, claim 1 also requires that the encode manager select one of the plurality of encoding parameter sets that provides a high rate of compression and the lower quality of service at the lowest billing rate, and in response to the second preference, the encoder manager selects one of the plurality of encoding parameter sets that provides the higher quality of service at the higher billing rate.

Christopoulos in view of Kost, Short and Mantha fails to teach or suggest the features set forth in claim 1. To illustrate, consider Appellant's previous Amendment filed December 2, 2010, where Appellant demonstrated that the asserted combination resulting from considering Christopoulos in view of Kost, Short and Mantha fails to teach or suggest the four different encoding parameter sets required by claim 1. In this previous Amendment, Appellant noted that Christopoulos only encodes two different types of data, video data and image data. The previous Office Action dated August 5, 2010 (as well as the current Final Office Action) agreed on this

point, noting in the rejection of this feature of claim 1 that "while Christopoulos states selecting multiple different parameter sets to encode two different types of multimedia data … Christopoulos does not explicitly state the use of a three [sic] parameter sets for encoding three different data type [sic] or an encoding parameter set for encoding multiple types of the plurality of types of data." The previous Office Action dated August 2, 2010 (and the current Office Action) cited to Kost to overcome this deficiency of Christopoulos, alleging that Kost discloses an encoding set to encode audio data and an encoding set to encode both video and audio data.

Appellant then demonstrated in this previous Amendment that the Office Action relied on an improper construction of paragraph [0084] of Kost to reach the conclusion that Kost cures the above noted deficiencies of Christopoulos. Appellant noted that paragraph [0084] of Kost indicates that "in addition to the video, the audio **12*b*** may be encoded." (Emphasis in original) While the previous and current Office Action construed this portion of Kost to suggest that there is an encoding parameter set for encoding audio and video and another for encoding the audio, Kost makes clear throughout its entirety that the Kost system typically encodes ***both*** the audio and video (*see*, e.g., FIG. 1), except for this portion of paragraph [0084], which suggests that the audio data ***may*** be encoded. Kost, however, always encodes the video data, and may or may not encode the audio data. Yet, nothing in this portion of Kost suggests any case where audio data is encoded and the video data is not encoded. Instead, Kost makes it clear that the video data is always encoded and the audio data may not or may not be encoded.

Appellant concluded the previous Amendment by noting that Chritopoulos in view of Kost would at most only suggest three parameter sets. As a result, the combination of references asserted by the Office Action fails to teach or suggest the four parameter sets required by claim 1. Moreover, none of the portions of Short and Mantha relied on by the Office Action in rejecting claim 1 overcome this deficiency of Christopoulos and Kost. Consequently, the combination resulting from considering Christopoulos in view of Kost, Short and Mantha fails to teach or suggest this feature of claim 1 requiring that the plurality of encoding parameter sets include a first encoding parameter set for encoding only a first type of the plurality of types of data, a second encoding parameter set for encoding only a second type of the plurality of types of data different from the first type, a third encoding parameter set for encoding only a third type of the plurality of types of data different from the first and second types and a fourth encoding parameter set for encoding multiple types of the plurality of types of data..

The Final Office Action continued in the "Response to Argument" section by paraphrasing Appellant's argument above and stated that "just because the audio data may be encoded differently than the video data, does not mean that there is a separate encoding parameter set only for audio data." The Final Office Action then indicated the Examiner's disagreement, and stated:

> "[T]here appears to exist no clear differentiation between parameter sets other than the parameter sets are to encode a specific type of data. With respect to the above statement, the Examiner is unable to differentiate how for instance a specific encoding parameter set for audio such as mp3 may be used with respect to Kost, while a specific encoding parameter set for video data without audio data such as mpeg may be used."

Appellant is unsure as to how this comment is relevant to the discussion of whether or not Kost discloses encoding of both audio data and video data using a single parameter set, or using two separate parameter sets. Kost is clear on this point. In particular, the Kost system encodes both audio data and video data, but in some instances may not encode the audio data. Therefore, the Kost system encodes either audio data and video data or only encoded video data, resulting in the three parameter sets noted above, when applied in view of Christopoulos and the other applied references. For the reasons set forth above, the applied references do not teach or suggest the four parameter sets explicitly required by claim 1.

Considering the Examiner's professed difficulty in construing the encoding parameter sets of claim 1 in view of the plain language of claim 1 recited above, it seems that the Examiner is not construing the claims as a whole, which conflicts with the requirements of MPEP 2141.02. Given the plain language of claim 1 presented above, the encoding parameter sets are more than a definition of parameter sets to encode a particular type of data, but are a used to enable transcoding so as to meet a user preference in terms of a quality of service and a billing rate. Thus, the plain language of claim 1 conflicts with the statement in the Final Office Action that "there appears to exist no clear differentiation between parameter sets other than the parameter sets are to encode a specific type of data." Given the number of features recited by claim 1, either directly describing the encoding parameter sets or associating the encoding parameter sets with various other features of claim 1 (many of which are reproduced above), the Final Office Action failed to construe the claims as a whole, in direct conflict with the explicit requirement of MPEP 2141.02 requiring that the claims be construed as a whole.

When construed as a whole, the plain language of claim 1 requires the encoding parameter sets to be selected so as to achieve a user preference with respect to a quality of service and billing rate (whether low or high quality of service or low or high billing rate). According to claim 1, in response to the first user preference, the encode manager selects one of the plurality of encoding parameter sets that provides a high rate of compression and the lower quality of service at the lowest billing rate. Claim 1 also requires that, in response to the second preference, the encoder manager selects one of the plurality of encoding parameter sets that provides the higher quality of service at the higher billing rate. Thus, claim 1 requires that one of the plurality of encoding parameter sets in selected in response to each of the first and second preferences, where only the fourth of the plurality of encoding parameter sets, according to claim 1, may encode multiple types of data. Accordingly, claim 1 provides a way by which user preferences may be integrated into transcoding decisions in such a manner that multiple different encoding parameter sets may be defined based on user preferences with respect to the quality of service and the billing rate. Accordingly, the parameter encoding sets of claim 1 are differentiated based on more than just the types of data each parameter encoding set encodes.

The applied references generally represent a system capable of encoding two types of data (i.e., video and image data) as well as a two or more types of data (i.e., both video and data). The fact that the current Final Office Action considers encoding audio differently than video as being suggestive of a separate audio-only encoding parameter set and a video-only encoding parameter set assumes a construction of encoding parameter sets that is not supported by the plain language of claim 1. In other words, claim 1 specifically requires a fourth encoding parameter set for encoding multiple types of the plurality of types of data, in direct contrast with this construction presented in the Final Office Action. The Final Office Action did not address how the disclosure of Kost with regard to encoding both audio data and video data reads on this fourth encoding parameter set recited by claim 1when the audio and video data are encoded in the "same" manner, but not when encoded differently. There is nothing in claim 1 to suggest that the parameters defined in the fourth encoding parameter set must be the same for the multiple types of data, only that the forth encoding parameter set is for encoding multiple types of the plurality of types of data. For this reason, the Examiner's construction of this fourth encoding parameter set appears to improperly require limitations not included in claim 1. The

applied referneces simply do not teach or suggest a fourth encoding parameter set for encoding multiple types of the plurality of types of data, as required by claim 1.

Furthermore, Appellant is unsure how video data and audio data could be encoded the "same" when they represent entirely different data that generally relies on entirely different encoding schemes to accomplish adequate compression. In any event, there is nothing in any of the applied references that would have suggested the plurality of encoding parameter sets required by Appellant's claim 1 for the reasons presented above.

As another example illustrating the failure of the applied references to teach or suggest each and every element of Appellant's claim 1, Chrtopoulos in view of Kost, Short and Mantha do not teach or suggest an encoder system included within the wireless service provider equipment for selectively re-encoding the received stream, as required by claim 1. Instead, Christopolous discloses techniques that always re-encode multimedia data. For example, consider the following reproduction of FIG. 3 of Christopoulos:

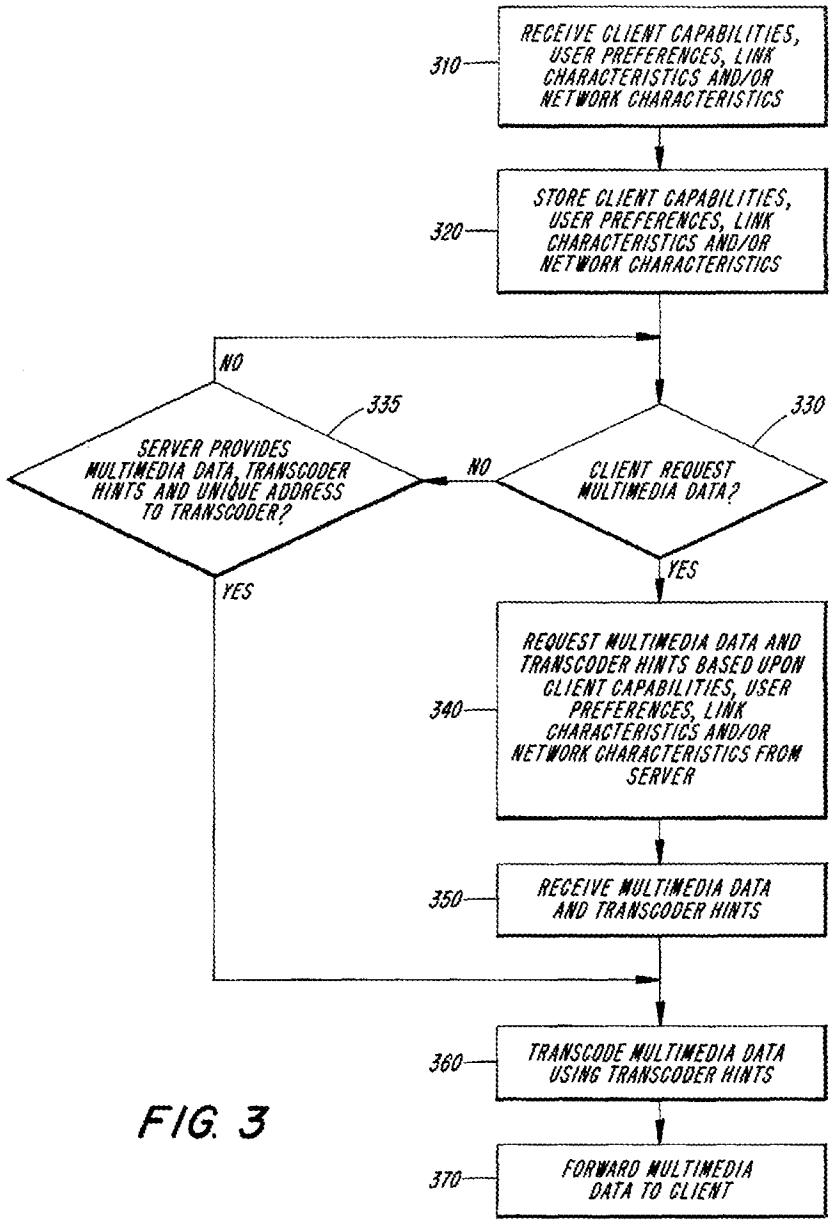


FIG. 3

In the above reproduced FIG. 3, the Christopoulos system always transcodes the multimedia data using transcoder hints in accordance with block 360. There is no block preceding block 360 in the flowchart of FIG. 3 that even so much as suggests a decision with respect to whether or not to transcode the multimedia data. To the contrary, if there is multimedia data and transcoder hints, the Christopoulos system transcodes the multimedia data. If there has been no client request for multimedia data, then there is no reason to transcode. If the hints are not available, the Christopoulos system requests the hints. In all instances, the Christopoulos system transcodes the multimedia data so long as multimedia data is present to transcode. This is exactly opposite

of the feature of claim 1 requiring an encoder system included within the wireless service provider equipment **for selectively re-encoding** the received stream.

None of the portions of Kost, Short and Mantha on which the Office Action relies in rejecting this feature of claim 1 overcome this deficiency of Christopoulos. Consequently, the combination resulting from Christopoulos in view of Kost, Short and Mantha fails to teach or suggest this feature of claim 1 requiring an encoder system included within the wireless service provider equipment for selectively re-encoding the received stream.

In rejecting this feature of claim 1, the Office Action indicates that paragraphs [0007], [0035], [0037], [0038], [0046] and FIGS. 1-3 (specifically citing items 350 and 360 of FIG. 3) disclose this feature of claim 1. Appellant can find nothing in any of these cited portions of Christopoulos to even so much as suggest this feature of claim 1 directed to selectively re-encoding the received stream. Instead, as noted above, FIG. 3 unconditionally or always transcodes the multimedia data as indicated by block or item 360. The Office Action is apparently reading out the term "selectively" when construing this feature of claim 1. This is improper.

For at least these reasons, Christopoulos in view of Kost, Short and Mantha fails to teach or suggest the features of claims 1-2, 5, 7, 9-12, 14, 17 and 20-23.

Claim 8 (Group 2)

Appellant argues claim 8 under a separate heading. Claim 8 recites the apparatus of claim 1, where the encoder system further re-encodes the received stream by re-encoding the decoded stream using the selected one of the plurality of encoding parameter sets for each of the first and second users to output the encoded stream differently for each of the first and second users with principles set forth by the respective encoding parameter set. That is, currently amended claim 8 requires encoding the same stream to output two different encoded streams for each of the first and second users. Nothing in any of the applied references teaches or suggests this feature of claim 8.

When rejecting this feature of claim 8, the Office Action returns, once again, to paragraphs [0036]-[0038] and [0046] in conjunction with FIGS. 3 and 5 of Christopoulos and alleged these cited portions of Christopoulos teach this feature of currently amended claim 8. This portion of Christopoulos, however, merely suggests that transcoder hints are stored with its

associated multimedia data and that these hints may be applied to transcode the multimedia data. In this cited portion of Christopoulos, Appellant can find no reference to transcoding the multimedia data twice to output two different encoded streams for two different users. At most, Christopoulos describes application of the Christopoulos techniques with respect to a single client. The remaining portions of the other applied references, i.e., Kost, Short and Mantha, relied on by the Office Action do not overcome this deficiency, even when considering in view of Christopoulos.

Consequently, Christopoulos in view of Kost, Short and Mantha do not teach or suggest this feature of claim 8.

Claims 25–26, 29, 32, 35–36, 38, 42 and 44–47 (Group 3)

Appellant argues claims 25–26, 29, 32, 35–36, 38, 42 and 44–47 under a separate heading as a group. Appellant directs the Board to independent claim 25 as the claim representative of the group. Appellant's independent claim 25 recites a method for providing digital multimedia in a wireless communication system. The method of claim 25 comprises determining with a customer manager of the wireless communication system a first user preference for selective re-encoding of a multimedia stream for a first user and a second user preference for selective re-encoding of the multimedia stream for a second user, receiving the multimedia stream at an encode manager of the wireless communication system and selecting at least one of a plurality of encoding parameter sets in accordance with an encoding scheme for each of the first and second user preferences.

Claim 25 further requires that the encoding scheme include a first scheme based on a first user preference and a second scheme based on the second user preference, the multimedia stream include a plurality of different types of data, and the plurality of encoding parameter sets include a first encoding parameter set for encoding only a first type of the plurality of types of data, a second encoding parameter set for encoding only a second type of the plurality of types of data different from the first type, a third encoding parameter set for encoding only a third type of the plurality of types of data different from the first and second types and a fourth encoding parameter set for encoding multiple types of the plurality of types of data. Claim 25 also requires that the first user preference and the second user preference each indicates which of the

first, second, third and fourth encoding parameter sets to use when encoding the multimedia stream.

According to claim 25, the method also comprises selectively re-encoding, with an encoder system of the wireless communication system, the received stream using the selected one of the plurality of encoding parameter sets to output an encoded stream with principles set fourth by the selected one of the plurality of encoding parameter sets. In addition, claim 25 requires that the first user preference specifies a first demand to provide the multimedia stream at a lower quality of service and a lowest billing rate, and the second user preference specifies a second demand to provide the multimedia stream at a higher quality of service and a higher billing rate relative to the first demand. Moreover, claim 25 requires, in response to the first user preference, the encode manager selects one of the plurality of encoding parameter sets that provides a high rate of compression and the lower quality of service at the lowest billing rate, and in response to the second preference, the encoder manager selects one of the plurality of encoding parameter sets that provides the higher quality of service at the higher billing rate.

For reasons similar to those set forth above, Christopoulos in view of Kost, Short and Mantha do not teach or suggest the plurality of encoding parameter sets required by claim 25 that include a first encoding parameter set for encoding only a first type of the plurality of types of data, a second encoding parameter set for encoding only a second type of the plurality of types of data different from the first type, a third encoding parameter set for encoding only a third type of the plurality of types of data different from the first and second types and a fourth encoding parameter set for encoding multiple types of the plurality of types of data. Furthermore, for reasons similar to those set forth above, Christopoulos in view of Kost, Short and Mantha do not teach or suggest the feature of claim 25 requiring selectively re-encoding, with an encoder system of the wireless communication system, the received stream using the selected one of the plurality of encoding parameter sets to output an encoded stream with principles set fourth by the selected one of the plurality of encoding parameter sets.

Consequently, Christopoulos in view of Kost, Short and Mantha do not teach or suggest this feature of claim 25–26, 29, 32, 35–36, 38, 42 and 44–47.

Claims 49–50, 53, 56–60, 62, 66 and 68–71 (Group 4)

Appellant argues claims 49–50, 53, 56–60, 62, 66 and 68–71 under a separate heading as a group. Appellant directs the Board to independent claim 49 as the claim representative of the group. Appellant's independent claim 49 recites an apparatus operable in a wireless communication system. The apparatus of claim 49 comprises means for receiving, within the wireless communication system, a decoded stream, means for determining a first user preference for selectively re-encoding the decoded stream for a first user and a second user preference for selective re-encoding of the multimedia stream for a second user and means for selecting, within the wireless communication system, at least one of a plurality of encoding parameter sets in accordance with an encoding scheme to use for re-encoding the received decoded stream for each of the first and second user preferences.

According to claim 49, the encoding scheme includes a first scheme based on the first user preference and a second scheme based on the second user preference, the decoded stream includes a plurality of different types of data, the plurality of encoding parameter sets include a first encoding parameter set for encoding only a first type of the plurality of types of data, a second encoding parameter set for encoding only a second type of the plurality of types of data different from the first type, a third encoding parameter set for encoding only a third type of the plurality of types of data different from the first and second types and a fourth encoding parameter set for encoding multiple types of the plurality of types of data, and the first user preference and the second user preference each indicates which of the first, second, third and fourth encoding parameter sets to use when encoding the decoded stream.

Claim 49 also requires that the apparatus further comprise means for re-encoding, within the wireless communication system, the received decoded stream to output an encoded stream in accordance with the selected one of the plurality of encoding parameter sets. Claim 49 further requires that the first user preference specifies a first demand to provide the multimedia stream at a lower quality of service and a lowest billing rate, and the second user preference specifies a second demand to provide the multimedia stream at a higher quality of service and a higher billing rate relative to the first demand and the means for selecting at least one of a plurality of encoding parameter sets comprises means for selecting, in response to the first user preference, one of the plurality of encoding parameter sets that provides a high rate of compression and the lower quality of service at the lowest billing rate, and in response to the second preference, one

of the plurality of encoding parameter sets that provides the higher quality of service at the higher billing rate.

For reasons similar to those set forth above, Christopoulos in view of Kost, Short and Mantha do not teach or suggest the plurality of encoding parameter sets required by claim 49 that include a first encoding parameter set for encoding only a first type of the plurality of types of data, a second encoding parameter set for encoding only a second type of the plurality of types of data different from the first type, a third encoding parameter set for encoding only a third type of the plurality of types of data different from the first and second types and a fourth encoding parameter set for encoding multiple types of the plurality of types of data. Furthermore, for reasons similar to those set forth above, Christopoulos in view of Kost, Short and Mantha do not teach or suggest the feature of claim 49 requiring means for determining a first user preference for selectively re-encoding the decoded stream for a first user and a second user preference for selective re-encoding of the multimedia stream for a second user.

Consequently, Christopoulos in view of Kost, Short and Mantha do not teach or suggest this feature of claims 49–50, 53, 56–60, 62, 66 and 68–71.

Claims 73–74, 77 and 79 (Group 5)

Appellant argues claims 73–74, 77 and 79 under a separate heading as a group. Appellant directs the Board to independent claim 73 as the claim representative of the group. Appellant's independent claim 73 recites a mobile station operable in a communication system. Claim 73 requires that the mobile device comprise a transceiver configured to communicate with a wireless provider system and a processor for displaying a multimedia stream received from the wireless provider system via the transceiver, wherein the multimedia stream is encoded using a first one of a plurality of encoding parameter sets and a second one of the plurality of encoding parameter sets in accordance with an encoding scheme.

According to claim 73, the encoding scheme comprises a first scheme based a first user preference and a second scheme based on a second user preference, the multimedia stream includes a plurality of different types of data, and the plurality of encoding parameter sets include a first encoding parameter set for encoding only a first type of the plurality of types of data, a second encoding parameter set for encoding only a second type of the plurality of types of data different from the first, a third encoding parameter set for encoding only a third type of the

plurality of types of data different from the first and second types and a fourth encoding parameter set for encoding multiple types of the plurality of types of data.

Also, according to claim 73, the first user preference and the second user preference each indicates which of the first, second, third and fourth encoding parameter sets to use when encoding the multimedia stream and the first user preference specifies a first demand to provide the multimedia stream at a lower quality of service and a lowest billing rate, and the second user preference specifies a second demand to provide the multimedia stream at a higher quality of service and a higher billing rate relative to the first demand such that in response to the first user preference, one of the plurality of encoding parameter sets that provides a high rate of compression and the lower quality of service is selected to provide the lowest billing rate, and in response to the second preference, one of the plurality of encoding parameter sets is selected to provide the higher quality of service at the higher billing rate.

For reasons similar to those set forth above, Christopoulos in view of Kost, Short and Mantha do not teach or suggest the plurality of encoding parameter sets required by claim 73 that include a first encoding parameter set for encoding only a first type of the plurality of types of data, a second encoding parameter set for encoding only a second type of the plurality of types of data different from the first type, a third encoding parameter set for encoding only a third type of the plurality of types of data different from the first and second types and a fourth encoding parameter set for encoding multiple types of the plurality of types of data.

Consequently, Christopoulos in view of Kost, Short and Mantha do not teach or suggest this feature of claims 73–74, 77 and 79.

Claim 80 (Group 6)

Appellant argues claim 80 separately. Appellant's independent claim 80 recites a communication system comprising a customer manager to determine a first user preference for selective re-encoding of a multimedia stream, and a second user preference for selective re-encoding of a multimedia stream and an encode manager that receives the multimedia stream, wherein the multimedia stream is encoded at a first resolution. The communication system of claim 80 also includes an encoder system that dynamically customizes a re-encoding of the received stream to a second resolution and a third resolution using encoding parameter sets selected from a plurality of encoding parameter sets to selectively render an encoded stream with

principles set forth by the selected encoding parameter sets, wherein the selected encoding parameter sets are determined based on an encoding scheme.

According to claim 80, the encoding scheme comprises a first scheme based on a first user preference and a second scheme based on the second user preference, wherein the multimedia stream includes a plurality of different types of data, the plurality of encoding parameter sets include a first encoding parameter set for encoding only a first type of the plurality of types of data, a second encoding parameter set for encoding only a second type of the plurality of types of data different from the first type, a third encoding parameter set for encoding only a third type of the plurality of types of data different from the first and second types and a fourth encoding parameter set for encoding multiple types of the plurality of types of data,

Moreover, according to claim 80 the first user preference and the second user preference each indicates which of the first, second, third and fourth encoding parameter sets to use when encoding the multimedia stream, and the first user preference further specifies a first demand to provide the multimedia stream at a lower quality of service and a lowest billing rate, and the second user preference specifies a second demand to provide the multimedia stream at a higher quality of service and a higher billing rate relative to the first demand. In addition, claim 80 requires that, in response to the first user preference, the encoder system selects at least one of the plurality of encoding parameter sets that provides a high rate of compression and the lower quality of service at the lowest billing rate and in response to the second preference, the encoder system selects one of the plurality of encoding parameter sets that provides the higher quality of service at the higher billing rate.

For reasons similar to those set forth above, Christopoulos in view of Kost, Short and Mantha do not teach or suggest the plurality of encoding parameter sets required by claim 80 that include a first encoding parameter set for encoding only a first type of the plurality of types of data, a second encoding parameter set for encoding only a second type of the plurality of types of data different from the first type, a third encoding parameter set for encoding only a third type of the plurality of types of data different from the first and second types and a fourth encoding parameter set for encoding multiple types of the plurality of types of data. Furthermore, for reasons similar to those set forth above, Christopoulos in view of Kost, Short and Mantha do not teach or suggest the feature of claim 80 requiring an encoder system that dynamically customizes a re-encoding of the received stream to a second resolution and a third resolution using encoding

parameter sets selected from a plurality of encoding parameter sets to selectively render an encoded stream with principles set forth by the selected encoding parameter sets, wherein the selected encoding parameter sets are determined based on an encoding scheme.

Consequently, Christopoulos in view of Kost, Short and Mantha do not teach or suggest this feature of claim 80.

Claims 81, 84–86 and 91 (Group 7)

Appellant argues claims 81, 84–86 and 91 under a separate heading as a group. Appellant directs the Board to independent claim 81 as the claim representative of the group. Appellant's independent claim 81 recites a communication system comprising at least one decoder receiving an incoming encoded multimedia stream and decoding the stream to render a decoded stream, a customer manager to determine a first user preference for selective re-encoding of the decoded stream, and a second user preference for selective re-encoding of a multimedia stream, at least one encoding system configured for receiving the decoded stream and encoding the decoded stream for first and second users using at least one of a plurality of encoding parameter sets to render an encoded stream and at least one computer that selects the at least one of the plurality of encoding parameter sets for each of the first and second users based on the first a user preference and the second user preference.

According to claim 81, the multimedia stream includes a plurality of different types of data, the plurality of encoding parameter sets include a first encoding parameter set for encoding only a first type of the plurality of types of data, a second encoding parameter set for encoding only a second type of the plurality of types of data different from the first, a third encoding parameter set for encoding only a third type of the plurality of types of data different from the first and second types and a fourth encoding parameter set for encoding multiple types of the plurality of types of data, and the first and second user preferences indicate which of the first, second, third and fourth encoding parameter sets to use when encoding the multimedia stream.

In addition, claim 81 requires that the first user preference specifies a first demand to provide the multimedia stream at a lower quality of service and a lowest billing rate, and the second user preference specifies a second demand to provide the multimedia stream at a higher quality of service and a higher billing rate relative to the first demand, and in response to the first user preference, the at least one computer selects the at least one of a plurality of encoding

parameter sets that provides a high rate of compression and the lower quality of service at the lowest billing rate and in response to the second preference, the encoder system selects one of the plurality of encoding parameter sets that provides the higher quality of service at the higher billing rate. The communication system of claim 80 further comprises at least one wireless transceiver for transmitting an encoded stream.

For reasons similar to those set forth above, Christopoulos in view of Kost, Short and Mantha do not teach or suggest the plurality of encoding parameter sets required by claim 81 that include a first encoding parameter set for encoding only a first type of the plurality of types of data, a second encoding parameter set for encoding only a second type of the plurality of types of data different from the first type, a third encoding parameter set for encoding only a third type of the plurality of types of data different from the first and second types and a fourth encoding parameter set for encoding multiple types of the plurality of types of data.

Consequently, Christopoulos in view of Kost, Short and Mantha do not teach or suggest this feature of claims 81, 84–86 and 91.

Claims 93–94, 96–97 and 101 (Group 8)

Appellant argues claims 93–94, 96–97 and 101 under a separate heading as a group. Appellant directs the Board to independent claim 93 as the claim representative of the group. Appellant's independent claim 93 recites a method for wirelessly providing digital multimedia within a wireless communication system. According to claim 93, the method comprises receiving an encoded multimedia stream, decoding the stream to render a decoded stream and selecting at least one of a plurality of encoding schemes to re-encode the stream at a wireless provider facility to render a re-encoded stream based on a first user preference and render a re-encoded stream based on a second user preference.

In addition, claim 93 requires that the multimedia streams includes a plurality of different types of data, the plurality of encoding parameter sets include a first encoding parameter set for encoding only a first type of the plurality of types of data, a second encoding parameter set for encoding only a second type of the plurality of types of data different from the first type, a third encoding parameter set for encoding only a third type of the plurality of types of data different from the first and second types and a fourth encoding parameter set for encoding multiple types of the plurality of types of data, and the first and second user preferences each indicates which of

the first, second, third and fourth encoding parameter sets to use when encoding the multimedia stream. Furthermore, claim 93 requires that the first user preference specifies a first demand to provide the multimedia stream at lower quality of service and a lowest billing rate and the second user preference specifies a second demand to provide the multimedia stream at a higher quality of service and a higher billing rate relative to the first demand.

Also, according to claim 93, the method comprises selecting a first one of the plurality of encoding parameter sets that provides a high rate of compression and the lower quality of service at the lowest billing rate and selecting a second one of the plurality of encoding parameter sets that provides the highest quality of service at the higher billing rate and wirelessly transmitting the re-encoded streams to at least one wireless mobile station.

For reasons similar to those set forth above, Christopoulos in view of Kost, Short and Mantha do not teach or suggest the plurality of encoding parameter sets required by claim 93 that include a first encoding parameter set for encoding only a first type of the plurality of types of data, a second encoding parameter set for encoding only a second type of the plurality of types of data different from the first type, a third encoding parameter set for encoding only a third type of the plurality of types of data different from the first and second types and a fourth encoding parameter set for encoding multiple types of the plurality of types of data.

Consequently, Christopoulos in view of Kost, Short and Mantha do not teach or suggest this feature of claim 93–94, 96–97 and 101.

Claims 102, 105–106 and 111 (Group 9)

Appellant argues claims 102, 105–106 and 111 as a group. Appellant directs the Board to independent claim 102 as the claim representative of the group. Appellant's independent claim 102 recites a wireless provider system. According to claim 102, the wireless provider system comprises means for decoding a received encoded multimedia stream, wherein the encoded multimedia stream includes a plurality of different types of data, first means for re-encoding only a first type of the plurality of types of the data, second means for re-encoding only a second type different from the first type of the plurality of types of the data, third means for re-encoding only a third type different from the first and second types of the plurality of types of the data and fourth means for re-encoding multiple types of the plurality of types of the data.

In addition, claim 102 requires that the wireless provider system include logic means for determining which one of the first, second, third and fourth means for re-encoding the stream to use for a first user and for a second user, based on a first user preference and a second user preference, wherein the first user preference and the second user preference each indicates which of the first, second, third and fourth means to use when encoding the multimedia stream.

Also, claim 102 requires that the first user preference further indicates which of the first, second, third and fourth means to use when encoding the multimedia stream based a first demand specified in the first user preference to provide the multimedia stream at lower quality of service and a lower billing rate, and wherein the second user preference specifies a second demand to provide the multimedia stream at a higher quality of service and a higher billing rate relative to the first demand.

For reasons similar to those set forth above, Christopoulos in view of Kost, Short and Mantha do not teach or suggest the wireless provider system required by claim 102 that includes first means for re-encoding only a first type of the plurality of types of the data, second means for re-encoding only a second type different from the first type of the plurality of types of the data, third means for re-encoding only a third type different from the first and second types of the plurality of types of the data and fourth means for re-encoding multiple types of the plurality of types of the data.

Consequently, Christopoulos in view of Kost, Short and Mantha do not teach or suggest this feature of claim 102, 105–106 and 111.

Claims 112, 115–118, 122 and 124–130 (Group 10)

Appellant argues claims 112, 115–118, 122 and 124–130 under a separate heading as a group. Appellant directs the Board to independent claim 112 as the claim representative of the group. Appellant's independent claim 112 recites a communication system. According to claim 112, the communication system comprises decoder means for receiving incoming encoded multimedia streams and decoding the streams to output decoded streams, and encoder means for receiving and encoding at least one of the decoded streams using a plurality of encoding parameter sets to output an encoded stream for a first user and an encoded stream for a second user, wherein the encoder means further includes means for selecting encoding parameters sets based on a first user preference and the second user preference.

Claim 112 further requires that the multimedia streams include a plurality of different types of data, the plurality of encoding parameter sets include a first encoding parameter set for encoding only a first type of the plurality of types of data, a second encoding parameter set for encoding only a second type of the plurality of types of data different from the first type, a third encoding parameter set for encoding only a third type of the plurality of types of data different from the first and second types and a fourth encoding parameter set for encoding multiple types of the plurality of types of data and the first and second user preferences each indicates which of the first, second, third and fourth encoding parameter sets to use when encoding the multimedia stream. Claim 112 also requires the first user preference specifies a first demand to provide the multimedia stream at lower quality of service and a lowest billing rate, and the second user preference specifies a second demand to provide the multimedia stream at a higher quality of service and a higher billing rate relative to the first demand.

In addition, claim 112 requires that, in response to the first user preference, the encoder means selects a first one of a plurality of encoding parameter that provides a high rate of compression and the lower quality of service at the lowest billing rate and in response to the second user preference, selects a second one of the plurality of encoding parameter sets that provides the highest quality of service at the higher billing rate.

For reasons similar to those set forth above, Christopoulos in view of Kost, Short and Mantha do not teach or suggest the plurality of encoding parameter sets required by claim 112 that include a first encoding parameter set for encoding only a first type of the plurality of types of data, a second encoding parameter set for encoding only a second type of the plurality of types of data different from the first type, a third encoding parameter set for encoding only a third type of the plurality of types of data different from the first and second types and a fourth encoding parameter set for encoding multiple types of the plurality of types of data

Consequently, Christopoulos in view of Kost, Short and Mantha do not teach or suggest this feature of claims 112, 115–118, 122 and 124–130.

Claim 132 (Group 11)

Appellant argues claim 132 under a separate heading. Claim 132 requires that the multimedia stream comprise a plurality of different types of multimedia data, the encoder manager select the first encoding parameter set for encoding only the first type of the plurality of

types of data, the encoder system re-encodes only the first type of the plurality of types of data using the selected first encoding parameter set, and the apparatus only sends the re-encoded first type of the plurality of types of data to a requesting device without sending any of the remaining types of the plurality of types of data to the requesting device.

In rejecting claim 132, the most recent Final Office Action asserted that paragraph [0036] of Christopoulos teaches these features of claim 132. The Final Office Action explained that this paragraph of Christopoulos teaches the features of claim 132 when disclosing that "only data types of received stream that can be reformatted and handled for transmission to a received device are used or sent." Appellant disagrees.

Reformatting of data indicates that its format not the types of content change, hence the use of the term re-formatting rather than filtering or other phrases that express selective delivery of different types of content. Paragraph [0036] of Christopoulos indicates that each multimedia packet includes associated transcoder hints, where these "transcoder hints are used by a transcoder to reformat the multimedia data in accordance with client capabilities, user preferences, link characteristics and/or network characteristics." Yet, these transcoder hints provide only for reformatting and Christopoulos does not suggest that only certain aspects of the data may be transcoded and sent. Consequently, Christopoulos does not teach or suggest the apparatus required by claim 132 that only sends the re-encoded first type of the plurality of types of data to a requesting device without sending any of the remaining types of the plurality of types of data to the requesting device.

Kost, as noted above, does teach to only encoding video data without encoding the audio data. However, Kost sends both the audio data and the video data, whether the audio data is encoded or not, as shown by FIG. 1 of Kost. Nothing in Kost teaches or suggests the apparatus required by claim 132 that only sends the re-encoded first type of the plurality of types of data to a requesting device without sending any of the remaining types of the plurality of types of data to the requesting device.

The remaining references, Short and Mantha, do not cure the deficiencies of either Christopoulos or Kost noted above, nor where these references cited for this purpose. Consequently, Christopoulos in view of Kost, Short and Mantha do not teach or suggest each and every feature of claim 132.

Claim 133 (Group 12)

Appellant argues claim 133 under a separate heading. Claim 133 requires that the multimedia stream comprises audio, video and text data, the encoder manager selects the first encoding parameter set for encoding only the audio data, the encoder system re-encodes only the audio data using the selected first encoding parameter set, and the apparatus only sends the re-encoded audio data to a requesting device without sending any of the video and text data to the requesting device.

In rejecting claim 132, the most recent Final Office Action asserted that paragraph [0036] of Christopoulos teaches these features of claim 132. The Final Office Action explained that this paragraph of Christopoulos teaches the features of claim 132 when disclosing that "only data types of received stream that can be reformatted and handled for transmission to a received device are used or sent." Appellant disagrees for many of the same reasons described above with respect to claim 132. Christopoulos in view of Kost, Short and Mantha do not teach or suggest the feature of claim 133 further requiring that the apparatus only sends the re-encoded audio data to a requesting device without sending any of the video and text data to the requesting device. With respect to claim 132, claim 133 clarifies that the only type of data sent is the re-encoded audio data without sending any of the video and text data to the requesting device. The relied upon portion of Christopoulos only describes reformatting, which does not teach or suggest this feature of claim 133 for the reasons described above with respect to claim 132. Kost always sends the audio and video data whether the audio data is encoded or not and therefore does not teach this feature of claim 133. The remaining references, Short and Mantha, do not cure the deficiencies of either Christopoulos or Kost noted above, nor where these references cited for this purpose. Consequently, Christopoulos in view of Kost, Short and Mantha do not teach or suggest each and every feature of claim 133.

SECOND GROUND OF REJECTION UNDER APPEAL

The Final Office Action maintained the rejection of claims 3–4, 24, 27–28, 48, 51–52, 72, 75–76, 88–90, 98–100, 108–110 and 119–121 under 35 USC § 103(a) as being unpatentable over Christopoulos, Kost, and Short, and Mantha, and in further view of Vetro et al. (US 2004/0203851; hereinafter "Vetro"). Appellant argues claims 3–4, 24, 27–28, 48, 51–52, 72, 75–76, 88–90, 98–100, 108–110 and 119–121 as a group, electing claim 3 as representative of

the group. Vetro does not cure the deficiencies of the combination resulting from considering Christopoulos in view of Kost, Short, and Mantha noted above with respect to claim 1. Chritopoulos in view of Kost, Short, Mantha and Vetro, therefore, does not teach or suggest each and every feature of claim 1 and, as a result, do not teach or suggest each and every feature of claim 3. For this reason, Christopoulos in view of Kost, Short, Mantha and Vetro do not teach or suggest this feature of claims 3–4, 24, 27–28, 48, 51–52, 72, 75–76, 88–90, 98–100, 108–110 and 119–121.

THIRD GROUND OF REJECTION UNDER APPEAL

The Final Office Action maintained the rejection of claims 6, 30, 54 and 78 under 35 USC § 103(a) as being unpatentable over Christopoulos, Kost, Short and Mantha as applied to claims 2, 26, 50 and 74 above, and in view of Wang et al. (US 2002/0152317; hereinafter "Wang"). Appellant argues claims 6, 30, 54 and 78 as a group, electing claim 6 as representative of the group.

Claim 6 depends from claim 2 and further requires that the apparatus comprises a plurality of encoders, each for executing one of the plurality of encoder parameter sets for each of the first and second users. The Final Office Action acknowledged that Christopoulos does not teach and implied that none of Kost, Short and Mantha teach or suggest this feature recited by claim 2.[212] The Final Office Action then asserted that Wang teaches a transcoder that uses a plurality of encoders each executing an encoder parameter set, concluding it would be obvious to a person of ordinary skill in the art at the time of the invention was made to combine the applied references in view of one another with the result of reaching the feature recited by claim 6.[213] Appellant disagrees.

Wang teaches that a transcoder may include a plurality of encoders that re-encodes video data at different bandwidth required by different clients. Yet, Wang's teaching of transcoding video data to generate compressed video data that satisfies different bandwidth requirements does not teach or suggest the encoding parameter sets required by claim 1, much less the particular requirement of claim 6 that the apparatus further comprise a plurality of encoders, each for executing one of the plurality of encoder parameter sets for each of the first and second users.

[212] Final Office Action mailed March 14, 2011 at page 53
[213] *Id.*

The Wang encoders are merely general purpose encoders that are configured to achieve a certain compression rate, which is a well known operation of conventional encoders. The Wang encoders do not execute an encoder parameter set in the manner required by claim 6.

Moreover, Wang does not teach or even so much as suggest the encoder parameter sets required by claim 1, contrary to the assertions presented in the Final Office Action. Wang is merely cited for its teaching of multiple encoders and does not overcome the deficiencies of the combination resulting from considering Christopoulos in view of Kost, Short and Mantha. Consequently, Christopoulos in view of Kost, Short, Mantha and Wang do not teach or suggest each and every feature of claim 6.

For this reason, Christopoulos in view of Kost, Short, Mantha and Wang do not teach or suggest each and every feature of claims 6, 30, 54 and 78.

FOURTH GROUND OF REJECTION UNDER APPEAL

The Final Office Action maintained the rejection of claims 13, 15, 37, 39–40, 61, and 63–64 under 35 USC § 103(a) as being unpatentable over Christopoulos, Kost, Short and Mantha, and in further view of Anand et al. (US 6,920,179; hereinafter "Anand"). Appellant argues claims 13, 15, 37, 39–40, 61, and 63–64 as a group, electing claim 13 as representative of the group. Anand does not cure the deficiencies of the combination resulting from considering Christopoulos in view of Kost, Short, and Mantha noted above with respect to claim 1. Chritopoulos in view of Kost, Short, Mantha and Anand, therefore, does not teach or suggest each and every feature of claim 1 and, as a result, do not teach or suggest each and every feature of claim 13. For this reason, Christopoulos in view of Kost, Short, Mantha and Anand do not teach or suggest this feature of claims 13, 15, 37, 39–40, 61, and 63–64.

FIFTH GROUND OF REJECTION UNDER APPEAL

The Final Office Action maintained the rejection of claims 18, 43 and 67 under 35 USC § 103(a) as being unpatentable over Christopoulos, Kost, Short and Mantha as applied to claims 1, 42, and 66 in view of Patterson (US 6,018,369; hereinafter "Patterson") and Tsukagoshi (US 5,731,847; hereinafter "Tsukagoshi"). Appellant argues claims 18, 43 and 67 as a group, electing claim 18 as representative of the group.

Claim 18 requires that the first encoding parameter is only for encoding audio data, the second encoding parameter set is only for encoding video data, the third encoding parameter set is only for encoding text data. Moreover, claim 18 requires that, for each of the first and second users, the encode manager selects two or more of the first one of the plurality of encoding parameter sets, the second one of the plurality of encoding parameter sets and a third one of the plurality of encoding parameter sets to only encode two or more of an audio type, a video type and a text type of the multimedia stream.

Page 60 of the Final Office Action asserted that paragraph [0084] of Kost teaches a first encoding parameter set that is only for encoding audio data. As noted above with respect to claim 1, however, Kost teaches that the audio data may be encoded in addition to the video data. In other words, Kost teaches to encoding video data only or both video and audio data, but fails to teach or suggest a first encoding parameter set that is only for encoding audio data, as required by claim 6. None of the other applied references teach or suggest this feature of claim 6, nor were these cited for this reason. Consequently, Christopoulos, Kost, Short, Mantha, Patterson and Tsukagoshi do not teach or suggest each and every feature of claim 18.

For at least this reason, Christopoulos, Kost, Short, Mantha, Patterson and Tsukagoshi do not teach or suggest each and every feature of claims 18, 43 and 67.

SIXTH GROUND OF REJECTION UNDER APPEAL

The Final Office Action maintained the rejection of claims 92 and 123 under 35 USC § 103(a) as being unpatentable over Christopoulos, Kost, Short and Mantha as applied to claims 14, 38, 62, 81, and 112. Appellant argues claims 92 and 123 as a group, electing claim 92 as representative of the group. The Final Office Action merely relies on the same references as those relied upon to reject claim 1. Consequently, the arguments made above with respect to claim 81 apply to claim 92. Christopoulos, Kost, Short and Mantha, therefore, do not teach or suggest each and every feature of claim 92.

For at least this reason, Christopoulos, Kost, Short and Mantha do not teach or suggest each and every feature of claims 92 and 123.

CONCLUSION OF ARGUMENT

It is earnestly requested that the Examiner's rejections be reversed, and that all of the pending claims be allowed.

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APPENDIX: CLAIMS ON APPEAL

Claim 1 An apparatus, operable in a wireless communication system, comprising:

a customer manager to determine a first user preference for selective re-encoding of a multimedia stream for a first user and a second user preference for selective re-encoding of the multimedia stream for a second user;

an encode manager included within wireless service provider equipment of the wireless communication system that receives the multimedia stream and selects at least one of a plurality of encoding parameter sets for each of the first and second user preferences in accordance with an encoding scheme, wherein the encoding scheme includes a first scheme based on the first user preference and a second scheme based on the second user preference, wherein the multimedia stream includes a plurality of different types of data, wherein the plurality of encoding parameter sets include a first encoding parameter set for encoding only a first type of the plurality of types of data, a second encoding parameter set for encoding only a second type of the plurality of types of data different from the first type, a third encoding parameter set for encoding only a third type of the plurality of types of data different from the first and second types and a fourth encoding parameter set for encoding multiple types of the plurality of types of data, and wherein the first user preference and the second user preference each indicates which of the first, second, third and fourth encoding parameter sets to use when encoding the multimedia stream; and

an encoder system included within the wireless service provider equipment for selectively re-encoding the received stream using the selected one of the plurality of encoding parameter sets to output an encoded stream with principles set fourth by the selected one of the plurality of encoding parameter sets,

wherein the first user preference specifies a first demand to provide the multimedia stream at a lower quality of service and a lowest billing rate, and the second user preference

specifies a second demand to provide the multimedia stream at a higher quality of service and a higher billing rate relative to the first demand, and

wherein in response to the first user preference, the encode manager selects one of the plurality of encoding parameter sets that provides a high rate of compression and the lower quality of service at the lowest billing rate, and in response to the second preference, the encoder manager selects one of the plurality of encoding parameter sets that provides the higher quality of service at the higher billing rate.

Claim 2 The apparatus of claim 1, wherein the encoding scheme is selected from a group that includes one or more of a scheme based on a system bandwidth, a scheme based on a wireless receiver capability, a scheme based on a number of users requesting a specific multimedia stream at a designated QoS, a scheme based on a multimedia data type, the scheme based on the user preference and a scheme based on characteristics of a mobile station.

Claim 3 The apparatus of claim 2, wherein the customer manager uses schemes based on the first and second user preferences to generate billing information for the first and second users.

Claim 4 The apparatus of claim 2, wherein the customer manager uses the multimedia data type generated for the first and second users to generate billing information for the first and second users.

Claim 5 The apparatus of claim 2, further comprising an encoder for executing the selected one of the plurality of encoding parameter sets for each of the first and second users based on the encoding scheme.

Claim 6 The apparatus of claim 2, further comprising a plurality of encoders, each for executing one of the plurality of encoder parameter sets for each of the first and second users.

Claim 7 The apparatus of claim 1, wherein the encoder manager includes a bandwidth manager that dynamically determines an available bandwidth for the multimedia stream.

Claim 8 The apparatus of claim 1, further comprising a decoder for receiving the multimedia stream and decoding the received stream to output a decoded stream, wherein the encoder system re-encodes the received stream by re-encoding the decoded stream using the selected one of the plurality of encoding parameter sets for each of the first and second users to output the encoded stream differently for each of the first and second users with principles set forth by the respective encoding parameter set.

Claim 9 The apparatus of claim 1, wherein the encoder manager comprises a bandwidth manager for selecting the one of the plurality of the encoding parameter sets for each of the first and second users in accordance with the encoding scheme.

Claim 10 The apparatus of claim 1, wherein the encoder system comprises an encoder for executing the selected one of the encoding parameter sets for each of the first and second users.

Claim 11 The apparatus of claim 1, further comprising a transceiver for wirelessly transmitting re-encoded streams to mobile stations for each of the first and second users.

Claim 12 The apparatus of claim 1, wherein the encoding system provides an output configurable for handheld devices that require a first frame rate and a first bandwidth.

Claim 13 The apparatus of claim 12, wherein:

the first frame rate is 10 frames per second; and

the first bandwidth is within 16 kilo bits per second.

Claim 14 The apparatus of claim 1,

wherein the received stream comprises a stream of a first resolution, and

wherein for the first user the encoding system re-encodes the received stream by re-encoding the stream of a first resolution to a stream of a second resolution, a first frame rate and a first bandwidth.

Claim 15 The apparatus of claim 14, wherein:

the first resolution is a video graphics array (VGA) format; and

the second resolution and first frame rate are configured for a handheld device.

Claim 16 (Cancelled).

Claim 17 The apparatus of claim 1, wherein for each of the first and second user preferences, the encode manager selects two or more of the plurality of encoding parameter sets in accordance with the encoding scheme.

Claim 18 The apparatus of claim 1,

wherein the first encoding parameter is only for encoding audio data,

wherein the second encoding parameter set is only for encoding video data,

wherein the third encoding parameter set is only for encoding text data, and

wherein for each of the first and second users, the encode manager selects two or more of the first one of the plurality of encoding parameter sets, the second one of the plurality of encoding parameter sets and a third one of the plurality of encoding parameter sets to only encode two or more of an audio type, a video type and a text type of the multimedia stream.

Claim 19 (Cancelled)

Claim 20 The apparatus of claim 1, further comprising a computer configured to receive the multimedia stream from a mobile station.

Claim 21 The apparatus of claim 20, wherein the mobile station is operable in the wireless communication system.

Claim 22 The apparatus of claim 1, wherein the multimedia stream is received using an over the air communication air interface.

Claim 23 The apparatus of claim 1, wherein the multimedia stream is received using an internet connection.

Claim 24 The apparatus of claim 1, further comprising a customer manager for generating billing information based on each of the first and second user preferences.

Claim 25 A method for providing digital multimedia in a wireless communication system, comprising:

determining with a customer manager of the wireless communication system a first user preference for selective re-encoding of a multimedia stream for a first user and a second user preference for selective re-encoding of the multimedia stream for a second user;

receiving the multimedia stream at an encode manager of the wireless communication system;

selecting at least one of a plurality of encoding parameter sets in accordance with an encoding scheme for each of the first and second user preferences,

wherein the encoding scheme includes a first scheme based on a first user preference and a second scheme based on the second user preference,

wherein the multimedia stream includes a plurality of different types of data,

wherein the plurality of encoding parameter sets include a first encoding parameter set for encoding only a first type of the plurality of types of data, a second encoding parameter set

for encoding only a second type of the plurality of types of data different from the first type, a third encoding parameter set for encoding only a third type of the plurality of types of data different from the first and second types and a fourth encoding parameter set for encoding multiple types of the plurality of types of data, and

wherein the first user preference and the second user preference each indicates which of the first, second, third and fourth encoding parameter sets to use when encoding the multimedia stream; and

selectively re-encoding, with an encoder system of the wireless communication system, the received stream using the selected one of the plurality of encoding parameter sets to output an encoded stream with principles set fourth by the selected one of the plurality of encoding parameter sets,

wherein the first user preference specifies a first demand to provide the multimedia stream at a lower quality of service and a lowest billing rate, and the second user preference specifies a second demand to provide the multimedia stream at a higher quality of service and a higher billing rate relative to the first demand, and

wherein in response to the first user preference, the encode manager selects one of the plurality of encoding parameter sets that provides a high rate of compression and the lower quality of service at the lowest billing rate, and in response to the second preference, the encoder manager selects one of the plurality of encoding parameter sets that provides the higher quality of service at the higher billing rate.

Claim 26 The method of claim 25, further comprising selecting the encoding scheme from a group of encoding schemes that includes one or more of a scheme based on a system bandwidth, a scheme based on a wireless receiver capability, a scheme based on a number of users requesting a specific multimedia stream at a designated QoS, a scheme based on a multimedia data type, the scheme based on the user preference and a scheme based on characteristics of a mobile station.

Claim 27 The method of claim 26, further comprising generating billing information for the first and second users using the schemes based on the first and second user preferences.

Claim 28 The method of claim 26, further comprising generating billing information for the first and second users based on the multimedia data type generated for the first and second users.

Claim 29 The method of claim 26, further comprising executing the selected one of the plurality of encoding parameter sets for each of the first and second users using an encoder.

Claim 30 The method of claim 26, further comprising executing the selected one of the plurality of encoding parameter sets for each of the first and second users using a plurality of encoders.

Claim 31 (Cancelled)

Claim 32 The method of claim 25, further comprising receiving the multimedia stream at a decoder and decoding the received stream to output a decoded stream.

Claim 33 (Cancelled).

Claim 34 The method of claim 25, further comprising executing the selected at least one of the encoding parameter sets for each of the first and second users using an encoder.

Claim 35 The method of claim 25, further comprising wirelessly transmitting the re-encoded stream for each of the first and second users.

Claim 36 The method of claim 25, further comprising generating an output, configurable for handheld devices that require a first frame rate and a first bandwidth.

Claim 37 The method of claim 36, wherein:

the first frame rate is 10 frames per second; and

the first bandwidth is within 16 kilo bits per second.

Claim 38 The method of claim 25,

wherein the received stream includes a stream of a first resolution, and

wherein for the first user the encoding system re-encodes the stream of the first resolution to stream of a second resolution, a first frame rate and a first bandwidth.

Claim 39 The method of claim 38, wherein:

the first resolution is a video graphics array (VGA) format; and

the second resolution and first frame rate are configured for a handheld device.

Claim 40 The method of claim 38, wherein:

the first frame rate is within 10 to 15 frames per second; and

the first bandwidth is within 16 to 64 kilo bits per second.

Claim 41 (Cancelled)

Claim 42 The method of claim 25, wherein for each of the first and second user preferences, selecting at least one of the plurality of encoding parameter sets comprises selecting two or more of the plurality of encoding parameter sets in accordance with the encoding scheme,

wherein selectively re-encoding the received stream comprises selectively re-encoding the received stream using the selected two or more of the plurality of encoding parameter sets for each of the first and second user preferences.

Claim 43 The method of claim 42,

wherein the first encoding parameter is only for encoding audio data,

wherein the second encoding parameter set is only for encoding video data,

wherein the third encoding parameter set is only for encoding text data,

wherein for each of the first and second users, selecting two or more of the plurality of encoding parameter sets includes selecting two or more of the first one of the plurality of encoding parameter sets, the second one of the plurality of encoding parameter sets and the third one of the plurality of encoding parameter sets, and

wherein selectively re-encoding the received stream comprises selectively re-encoding the received stream using the selected two or more of the plurality of encoding parameter sets for each of the first and second users to only encode two or more of an audio type, a video type and a text type of the multimedia stream.

Claim 44 The method of claim 25, further comprising receiving the multimedia stream from a mobile station.

Claim 45 The method of claim 44, wherein the mobile station is operable in the wireless communication system.

Claim 46 The method of claim 25, further comprising receiving the multimedia stream via a communication air interface.

Claim 47 The method of claim 25, further comprising receiving the multimedia stream via an internet connection.

Claim 48 The method of claim 25, further comprising generating billing information based on each of the first and second the user preferences.

Claim 49 An apparatus, operable in a wireless communication system, comprising:

means for receiving, within the wireless communication system, a decoded stream;

means for determining a first user preference for selectively re-encoding the decoded stream for a first user and a second user preference for selective re-encoding of the multimedia stream for a second user;

means for selecting, within the wireless communication system, at least one of a plurality of encoding parameter sets in accordance with an encoding scheme to use for re-encoding the received decoded stream for each of the first and second user preferences,

wherein the encoding scheme includes a first scheme based on the first user preference and a second scheme based on the second user preference,

wherein the decoded stream includes a plurality of different types of data,

wherein the plurality of encoding parameter sets include a first encoding parameter set for encoding only a first type of the plurality of types of data, a second encoding parameter set for encoding only a second type of the plurality of types of data different from the first type, a third encoding parameter set for encoding only a third type of the plurality of types of data different from the first and second types and a fourth encoding parameter set for encoding multiple types of the plurality of types of data, and

wherein the first user preference and the second user preference each indicates which of the first, second, third and fourth encoding parameter sets to use when encoding the decoded stream; and

means for re-encoding, within the wireless communication system, the received decoded stream to output an encoded stream in accordance with the selected one of the plurality of encoding parameter sets,

wherein the first user preference specifies a first demand to provide the multimedia stream at a lower quality of service and a lowest billing rate, and the second user preference specifies a second demand to provide the multimedia stream at a higher quality of service and a higher billing rate relative to the first demand, and

wherein the means for selecting at least one of a plurality of encoding parameter sets comprises means for selecting, in response to the first user preference, one of the plurality of encoding parameter sets that provides a high rate of compression and the lower quality of service at the lowest billing rate, and in response to the second preference, one of the plurality of encoding parameter sets that provides the higher quality of service at the higher billing rate.

Claim 50 The apparatus of claim 49, further comprising means for selecting the encoding scheme from a group of encoding schemes that includes one or more of a scheme based on a system bandwidth, a scheme based on a wireless receiver capability, a scheme based on a number of users requesting a specific multimedia stream at a designated QoS, a scheme based on a multimedia data type, the scheme based on the user preference and a scheme based on characteristics of a mobile station.

Claim 51 The apparatus of claim 50, further comprising means for generating billing information for the first and second users using the schemes based on the first and second user preferences.

Claim 52 The apparatus of claim 50, further comprising means for generating billing information for the first and second users based on the multimedia data type generated for the first and second users.

Claim 53 The apparatus of claim 50, further comprising means for executing the selected one of the plurality of encoding parameter sets for each of the first and second users using an encoder.

Claim 54 The apparatus of claim 50, further comprising means for executing the selected one of the encoding parameter sets for each of the first and second users using a plurality of encoders.

Claim 55 (Cancelled)

Claim 56 The apparatus of claim 49, further comprising means for receiving the multimedia stream at a decoder and decoding the received stream to output the decoded stream.

Claim 57 (Cancelled)

Claim 58 The apparatus of claim 49, further comprising means for executing the selected one of the encoding parameter sets for each of the first and second users using an encoder.

Claim 59 The apparatus of claim 49, further comprising means for transmitting the re-encoded stream for each of the first and second users.

Claim 60 The apparatus of claim 49, further comprising means for generating an output, configurable for handheld devices that require a first frame rate and a first bandwidth.

Claim 61 The apparatus of claim 60, wherein:

the first frame rate is 10 frames per second; and

the first bandwidth is within 16 kilo bits per second.

Claim 62 The apparatus of claim 49, wherein the received stream comprises a stream of a first resolution and means for re-encoding the received stream comprises for the first user, means for re-encoding the stream of the first resolution to a stream of a second resolution, a first frame rate and a first bandwidth.

Claim 63 The apparatus of claim 62, wherein:

the first resolution is a video graphics array (VGA) format; and

the second resolution and first frame rate are configured for a handheld device.

Claim 64 The apparatus of claim 62, wherein:

the first frame rate is within 10 to 15 frames per second; and

the first bandwidth is within 16 to 64 kilo bits per second.

Claim 65 (Cancelled)

Claim 66 The apparatus of claim 49

wherein for each of the first and second user preferences, the means for selecting at least one of the plurality of encoding parameter sets comprises means for selecting two or more of the plurality of encoding parameter sets in accordance with the encoding scheme,

wherein the means for selectively re-encoding the received stream comprises means for selectively re-encoding the received stream using the selected two or more of the plurality of encoding parameter sets for each of the first and second user preferences,.

Claim 67 The apparatus of claim 66,

wherein the first encoding parameter is only for encoding audio data,

wherein the second encoding parameter set is only for encoding video data,

wherein the third encoding parameter set is only for encoding text data,

wherein for each of the first and second users, the means for selecting two or more of the plurality of encoding parameter sets includes means for selecting two or more of the first one of the plurality of encoding parameter sets, the second one of the plurality of encoding parameter sets and the third one of the plurality of encoding parameter sets, and

wherein the means for selectively re-encoding the received stream comprises means for selectively re-encoding the received stream using two or more of the first, second and third ones of the plurality of encoding parameter sets for each of the first and second users to only encode two or more of an audio type, a video type and a text type of the multimedia stream.

Claim 68 The apparatus of claim 49, further comprising means for receiving the multimedia stream from a mobile station.

Claim 69 The apparatus of claim 68, wherein the mobile station is operable in wireless communication system.

Claim 70 The apparatus of claim 49, further comprising means for receiving the multimedia stream via a communication air interface.

Claim 71 The apparatus of claim 49, further comprising means for receiving the multimedia stream via an internet connection.

Claim 72 The apparatus of claim 49, further comprising means for generating billing information based on each of the first and second the user preferences.

Claim 73 A mobile station, operable in a communication system, comprising:

a transceiver configured to communicate with a wireless provider system; and

a processor for displaying a multimedia stream received from the wireless provider system via the transceiver, wherein the multimedia stream is encoded using a first one of a plurality of encoding parameter sets and a second one of the plurality of encoding parameter sets in accordance with an encoding scheme,

wherein the encoding scheme comprises a first scheme based a first user preference and a second scheme based on a second user preference,

wherein the multimedia stream includes a plurality of different types of data,

wherein the plurality of encoding parameter sets include a first encoding parameter set for encoding only a first type of the plurality of types of data, a second encoding parameter set for encoding only a second type of the plurality of types of data different from the first, a third encoding parameter set for encoding only a third type of the plurality of types of data different from the first and second types and a fourth encoding parameter set for encoding multiple types of the plurality of types of data,

wherein the first user preference and the second user preference each indicates which of the first, second, third and fourth encoding parameter sets to use when encoding the multimedia stream,

wherein the first user preference specifies a first demand to provide the multimedia stream at a lower quality of service and a lowest billing rate, and the second user preference specifies a second demand to provide the multimedia stream at a higher quality of service and a higher billing rate relative to the first demand such that in response to the first user preference, one of the plurality of encoding parameter sets that provides a high rate of compression and the lower quality of service is selected to provide the lowest billing rate, and in response to the second preference, one of the plurality of encoding parameter sets is selected to provide the higher quality of service at the higher billing rate.

Claim 74 The mobile station of claimed in 73, wherein the group of encoding schemes includes one or more of a scheme based on a system bandwidth a scheme based on a wireless receiver capability, a scheme based on a number of users requesting a specific multimedia stream at a designated QoS, a scheme based on a multimedia data type, the scheme based on the user preference and a scheme based on characteristics of a mobile station.

Claim 75 The mobile station of claim 74, wherein the schemes based on the first and second user preferences are used to generate billing information for the first and second users.

Claim 76 The mobile station of claim 74, wherein the multimedia data type generated for the first and second users is used to generate billing information.

Claim 77 The mobile station of claim 74, further comprising an encoder for executing the one of the encoder parameter sets for each of the first and second users based on the encoding scheme.

Claim 78 The mobile station of claim 74, further comprising a plurality of encoders, each for executing one of the plurality of encoder parameter sets for each of the first and second users based on the encoding scheme.

Claim 79 The mobile station of claim 74, further comprising a bandwidth manager for determining the available bandwidth for the multimedia stream.

Claim 80 A communication system, comprising:

a customer manager to determine a first user preference for selective re-encoding of a multimedia stream, and a second user preference for selective re-encoding of a multimedia stream;

an encode manager that receives the multimedia stream, wherein the multimedia stream is encoded at a first resolution; and

an encoder system that dynamically customizes a re-encoding of the received stream to a second resolution and a third resolution using encoding parameter sets selected from a plurality of encoding parameter sets to selectively render an encoded stream with principles set forth by the selected encoding parameter sets, wherein the selected encoding parameter sets are determined based on an encoding scheme,

wherein the encoding scheme comprises a first scheme based on a first user preference and a second scheme based on the second user preference,

wherein the multimedia stream includes a plurality of different types of data,

wherein the plurality of encoding parameter sets include a first encoding parameter set for encoding only a first type of the plurality of types of data, a second encoding parameter set for encoding only a second type of the plurality of types of data different from the first type, a third encoding parameter set for encoding only a third type of the plurality of types of data different from the first and second types and a fourth encoding parameter set for encoding multiple types of the plurality of types of data,

wherein the first user preference and the second user preference each indicates which of the first, second, third and fourth encoding parameter sets to use when encoding the multimedia stream, and

wherein the first user preference further specifies a first demand to provide the multimedia stream at a lower quality of service and a lowest billing rate, and the second user preference specifies a second demand to provide the multimedia stream at a higher quality of service and a higher billing rate relative to the first demand, and

wherein in response to the first user preference, the encoder system selects at least one of the plurality of encoding parameter sets that provides a high rate of compression and the lower quality of service at the lowest billing rate and in response to the second preference, the encoder system selects one of the plurality of encoding parameter sets that provides the higher quality of service at the higher billing rate.

Claim 81 A communication system, comprising:

at least one decoder receiving an incoming encoded multimedia stream and decoding the stream to render a decoded stream;

a customer manager to determine a first user preference for selective re-encoding of the decoded stream, and a second user preference for selective re-encoding of a multimedia stream;

at least one encoding system configured for receiving the decoded stream and encoding the decoded stream for first and second users using at least one of a plurality of encoding parameter sets to render an encoded stream;

at least one computer that selects the at least one of the plurality of encoding parameter sets for each of the first and second users based on the first a user preference and the second user preference, wherein the multimedia stream includes a plurality of different types of data, wherein the plurality of encoding parameter sets include a first encoding parameter set for encoding only a first type of the plurality of types of data, a second encoding parameter set for encoding only a second type of the plurality of types of data different from the first, a third encoding parameter set for encoding only a third type of the plurality of types of data different from the first and second types and a fourth encoding parameter set for encoding multiple types of the plurality of types of data, and wherein the first and second user preferences indicate which of the first, second, third and fourth encoding parameter sets to use when encoding the multimedia stream,

wherein the first user preference specifies a first demand to provide the multimedia stream at a lower quality of service and a lowest billing rate, and the second user preference specifies a second demand to provide the multimedia stream at a higher quality of service and a higher billing rate relative to the first demand, and

wherein in response to the first user preference, the at least one computer selects the at least one of a plurality of encoding parameter sets that provides a high rate of compression and the lower quality of service at the lowest billing rate and in response to the second preference, the encoder system selects one of the plurality of encoding parameter sets that provides the higher quality of service at the higher billing rate; and

at least one wireless transceiver for transmitting an encoded stream.

Claim 82 (Cancelled)

Claim 83 (Cancelled)

Claim 84 The system of Claim 81, wherein the computer further determines which of the plurality of encoding parameter sets to use for each of the first and second users based at least in part on a wireless mobile receiver capability.

Claim 85 The system of Claim 81, wherein the computer further determines which of the plurality of encoding parameter sets to use for each of the first and second users based at least in part on a number of users requesting a specific multimedia stream at a designated QoS for that stream.

Claim 86 The system of Claim 81, wherein the computer further determines which of the plurality of encoding parameter sets to use for each of the first and second users based at least in part on a multimedia data type.

Claim 87 (Cancelled)

Claim 88 The system of Claim 86, wherein a particular user's service classification is used to generate billing information.

Claim 89 The system of Claim 86, wherein characteristics of the encoded multimedia stream are used to generate billing information.

Claim 90 The system of Claim 86, wherein mobile receiver capabilities are used to generate billing information.

Claim 91 The system of Claim 81, wherein at least one of the plurality of encoding parameter sets is capable of encoding a multimedia stream at a resolution of a quarter common intermediate format (QCIF) or smaller.

Claim 92 The system of Claim 81, wherein at least one of the plurality of encoding parameter sets is capable of encoding a multimedia stream at a resolution of a common intermediate format (CIF) or larger.

Claim 93 A method for wirelessly providing digital multimedia within a wireless communication system, comprising:

receiving an encoded multimedia stream;

decoding the stream to render a decoded stream;

selecting at least one of a plurality of encoding schemes to re-encode the stream at a wireless provider facility to render a re-encoded stream based on a first user preference and render a re-encoded stream based on a second user preference , wherein the multimedia streams includes a plurality of different types of data, wherein the plurality of encoding parameter sets include a first encoding parameter set for encoding only a first type of the plurality of types of data, a second encoding parameter set for encoding only a second type of the plurality of types of data different from the first type, a third encoding parameter set for encoding only a third type of the plurality of types of data different from the first and second types and a fourth encoding parameter set for encoding multiple types of the plurality of types of data,

wherein the first and second user preferences each indicates which of the first, second, third and fourth encoding parameter sets to use when encoding the multimedia stream, and

wherein the first user preference specifies a first demand to provide the multimedia stream at lower quality of service and a lowest billing rate and the second user preference specifies a second demand to provide the multimedia stream at a higher quality of service and a higher billing rate relative to the first demand;

selecting a first one of the plurality of encoding parameter sets that provides a high rate of compression and the lower quality of service at the lowest billing rate and selecting a second one of the plurality of encoding parameter sets that provides the highest quality of service at the higher billing rate; and

wirelessly transmitting the re-encoded streams to at least one wireless mobile station.

Claim 94 The method of Claim 93, wherein the selecting act is undertaken dynamically.

Claim 95 (Cancelled)

Claim 96 The method of Claim 93, wherein the selecting act is undertaken based at least in part on a wireless mobile receiver capability.

Claim 97 (Cancelled)

Claim 98 The method of Claim 93, comprising using a particular user's service classification to generate billing information.

Claim 99 The system of Claim 93, comprising using characteristics of the encoded multimedia stream to generate billing information.

Claim 100 The system of Claim 93, comprising using mobile receiver capabilities is used to generate billing information.

Claim 101 The method of Claim 93, wherein the selecting act is undertaken based at least in part on a multimedia data type.

Claim 102 A wireless provider system, comprising:

means for decoding a received encoded multimedia stream, wherein the encoded multimedia stream includes a plurality of different types of data;

first means for re-encoding only a first type of the plurality of types of the data;

second means for re-encoding only a second type different from the first type of the plurality of types of the data;

third means for re-encoding only a third type different from the first and second types of the plurality of types of the data;

fourth means for re-encoding multiple types of the plurality of types of the data; and

logic means for determining which one of the first, second, third and fourth means for re-encoding the stream to use for a first user and for a second user, based on a first user preference and a second user preference, wherein the first user preference and the second user preference each indicates which of the first, second, third and fourth means to use when encoding the multimedia stream, and

wherein the first user preference further indicates which of the first, second, third and fourth means to use when encoding the multimedia stream based a first demand specified in the first user preference to provide the multimedia stream at lower quality of service and a lower billing rate, and wherein the second user preference specifies a second demand to provide the multimedia stream at a higher quality of service and a higher billing rate relative to the first demand.

Claim 103 (Cancelled)

Claim 104 (Cancelled)

Claim 105 The system of Claim 102, wherein the first and second user preferences include a factor that defines a wireless user characteristic.

Claim 106 The system of Claim 102, wherein the first and second user preferences include a factor that defines a multimedia data type.

Claim 107 (Cancelled)

Claim 108 The system of Claim 102, further comprising means for generating billing information based on a user service classification.

Claim 109 The system of Claim 102, further comprising means for generating billing information based on characteristics of the encoded multimedia stream.

Claim 110 The system of Claim 102, further comprising means for generating billing information based on mobile receiver capabilities.

Claim 111 The system of claim 102, wherein first and second user preferences include a factor selected from group of factors that include a factor based on a system bandwidth, a factor based on a current available system bandwidth, a factor based on a wireless user characteristic, a factor based on a number of users requesting a specific multimedia stream at a designated QoS a factor based on a multimedia data type and the factor based on the wireless user preference.

Claim 112 A communication system, comprising:

decoder means for receiving incoming encoded multimedia streams and decoding the streams to output decoded streams;

encoder means for receiving and encoding at least one of the decoded streams using a plurality of encoding parameter sets to output an encoded stream for a first user and an encoded stream for a second user,

wherein the encoder means further includes means for selecting encoding parameters sets based on a first user preference and the second user preference, wherein the multimedia streams include a plurality of different types of data, wherein the plurality of encoding parameter sets include a first encoding parameter set for encoding only a first type of the plurality of types of data, a second encoding parameter set for encoding only a second type of the plurality of types of data different from the first type, a third encoding parameter set for encoding only a third type of the plurality of types of data different from the first and second types and a fourth encoding parameter set for encoding multiple types of the plurality of types of data, wherein the first and second user preferences each indicates which of the first, second, third and fourth encoding parameter sets to use when encoding the multimedia stream,

wherein the first user preference specifies a first demand to provide the multimedia stream at lower quality of service and a lowest billing rate, and the second user preference specifies a second demand to provide the multimedia stream at a higher quality of service and a higher billing rate relative to the first demand

wherein in response to the first user preference, the encoder means selects a first one of a plurality of encoding parameter that provides a high rate of compression and the lower quality of service at the lowest billing rate and in response to the second user preference, selects a second one of the plurality of encoding parameter sets that provides the highest quality of service at the higher billing rate.

Claim 113 (Cancelled)

Claim 114 (Cancelled)

Claim 115 The system of Claim 112, wherein the encoder means includes means for determining which of the plurality of encoding parameter sets to use for each of the first and second user preferences based at least in part on a wireless mobile receiver capability.

Claim 116 The system of Claim 112, wherein the encoder means includes means for determining which of the plurality of encoding parameter sets to use for each of the first and second user preferences based at least in part on a number of users requesting a specific multimedia stream at a designated QoS for that stream.

Claim 117 The system of Claim 112, wherein the encoder means includes means for determining which of the plurality of encoding parameter sets to use for each of the first and second user preferences based at least in part on a multimedia data type.

Claim 118 The system of Claim 112, wherein the encoder means includes means for determining which of the plurality of encoding parameter sets to use for each of the first and second user preferences based at least in part on a wireless user preference.

Claim 119 The system of Claim 112, further comprising a billing means for generating billing information based on a particular user's classification.

Claim 120 The system of Claim 112, further comprising a billing means for generating billing information based on characteristics of the encoded multimedia stream a particular user's classification.

Claim 121 The system of Claim 112, further comprising a billing means for generating billing information based on mobile receiver capabilities.

Claim 122 The system of Claim 112, wherein at least one of the plurality of encoding parameter sets comprises an encoding parameter set that is used to encode the multimedia stream at a resolution of a quarter common intermediate format (QCIF) or smaller.

Claim 123 The system of Claim 112, wherein at least one of the plurality of encoding parameter sets comprises an encoding parameter set that is used to encode the multimedia stream at a resolution of a common intermediate format (CIF) or larger.

Claim 124 The system of Claim 81, wherein the computer determines which of the plurality of encoding parameter sets to use for each of the first and second user preferences based at least in part on a system bandwidth.

Claim 125 The system of Claim 81, wherein the computer determines which of the plurality of encoding parameter sets to use for each of the first and second user preferences based at least in part on a current available system bandwidth.

Claim 126 The method of Claim 93, wherein the selecting act is undertaken at least in part based on a bandwidth.

Claim 127 The system of Claim 102, wherein first and second user preferences include a factor that defines a system bandwidth.

Claim 128 The system of Claim 102, wherein first and second user preferences include a factor that defines a current available system bandwidth.

Claim 129 The system of Claim 112, wherein the encoder means further includes means for determining which of the plurality of encoding parameter sets to use for each of the first and second user preferences based at least in part on a system bandwidth.

Claim 130 The system of Claim 112, wherein encoder means further includes means for determining which encoding parameter set to use for each of the first and second user preferences based at least in part on a current available system bandwidth.

Claim 131 The communication system of Claim 112, wherein the system comprises wireless service provider equipment that wirelessly communicates re-encoded versions of the multimedia stream to different wireless mobile stations.

Claim 132 The apparatus of claim 1,

wherein the multimedia stream comprise a plurality of different types of multimedia data,

wherein the encoder manager selects the first encoding parameter set for encoding only the first type of the plurality of types of data,

wherein the encoder system re-encodes only the first type of the plurality of types of data using the selected first encoding parameter set, and

wherein the apparatus only sends the re-encoded first type of the plurality of types of data to a requesting device without sending any of the remaining types of the plurality of types of data to the requesting device.

Claim 133 The apparatus of claim 1,

wherein the multimedia stream comprises audio, video and text data,

wherein the encoder manager selects the first encoding parameter set for encoding only the audio data,

wherein the encoder system re-encodes only the audio data using the selected first encoding parameter set, and

wherein the apparatus only sends the re-encoded audio data to a requesting device without sending any of the video and text data to the requesting device.

APPENDIX: EVIDENCE

None

APPENDIX: RELATED PROCEEDINGS

None